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3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

**An Act to amend
The Reciprocal Enforcement of Maintenance Orders Act**

MR. WISHART



EXPLANATORY NOTE

The amendment corrects a typographical error.



BILL 1

1970

**An Act to amend
The Reciprocal Enforcement of Maintenance
Orders Act**

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Clause *c* of section 1 of *The Reciprocal Enforcement of Maintenance Orders Act* is amended by striking out "of" ^{R.S.O. 1960, c. 346, s. 1, cl. *c*, amended} where it occurs the first time in the first line and inserting in lieu thereof "or", so that the clause shall read as follows:

(*c*) "maintenance order" means an order or certificate of a court for the periodical payment of money as alimony or as maintenance.

2. This Act comes into force on the day it receives Royal Assent. <sup>Commence-
ment</sup>

3. This Act may be cited as *The Reciprocal Enforcement of Maintenance Orders Amendment Act, 1970*. ^{Short title}

An Act to amend The Reciprocal
Enforcement of Maintenance Orders Act

1st Reading

February 24th, 1970

2nd Reading

3rd Reading

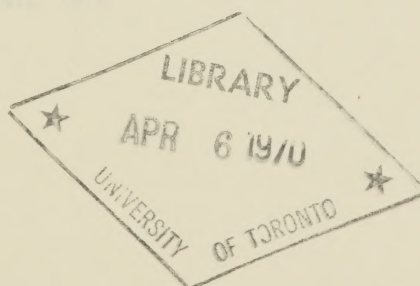
MR. WISHART

BILL 1

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

**An Act to amend
The Reciprocal Enforcement of Maintenance Orders Act**

Mr. WISHART



TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

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An Act to amend The Reciprocal
Enforcement of Maintenance Orders Act

1st Reading

February 24th, 1970

2nd Reading

March 10th, 1970

3rd Reading

March 18th, 1970

MR. WISHART

BILL 2

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Mining Act

MR. LAWRENCE (St. George)

EXPLANATORY NOTES

This Bill contains a complete revision of Part IX of the Act which deals with the operation of mines and Part XI of the Act which deals with offences, penalties and prosecutions.

The chief purpose of this revision is the adaptation to the mining industry of *The Construction Safety Act, 1961-62*, *The Construction Hoists Act, 1960-61*, *The Industrial Safety Act, 1964*, *The Trench Excavators' Protection Act*, and *The Elevators and Lifts Act*.

Other changes contained in this revision up-date the legislation to keep pace with advances in the mechanization of the mining industry including:

1. The electro-magnetic testing of all hoisting ropes throughout the total length. This testing equipment has been developed by the Ontario Mining Association and the Department of Mines in a joint venture over the past ten years.
2. Direct-fired heating of underground workings.
3. Non-destructive testing to be done on shafting, brakes, etc., on hoisting equipment and cranes, by such means as ultra-sonic examination, etc.
4. Requirements in regard to guide and rubbing ropes as used in shafts. This is a new development in Ontario.
5. Notification to be given on major electrical installations.
6. Protection to be taken when operating cranes and power shovels near overhead power lines.

Other notable changes include:

1. Advance mine rescue fresh air bases in deep mines.
2. Concreting shaft and raise openings which are to be abandoned.
3. Personal protective equipment such as footwear, hearing protection, etc.
4. Safety precautions to be taken when dump trucks are being repaired or adjusted.

BILL 2

1970

An Act to amend The Mining Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Paragraph 1 of section 1 of *The Mining Act* is ^{R.S.O. 1960, c. 241, s. 1, amended} amended by inserting after “mine” in the third line “or plant”, so that the paragraph shall read as follows:

1. “agent”, where it occurs in Parts IX and XI, means a person having, on behalf of the owner, the care or direction of a mine or plant or a part thereof.

(2) Paragraph 10 of the said section 1 is amended by in-^{R.S.O. 1960, c. 241, s. 1, amended}serting after “boilers” in the second line “compressors” and by adding at the end thereof “or plant”, so that the paragraph shall read as follows:

10. “machinery” includes steam and other engines, boilers, compressors, furnaces, milling and crushing apparatus, hoisting and pumping equipment, chains, trucks, tramways, tackle, blocks, ropes and tools, and all appliances used in or about or in connection with a mine or plant.

(3) Paragraphs 12 and 13 of the said section 1 are repealed ^{R.S.O. 1960, c. 241, s. 1, pars. 12, 13, re-enacted} and the following substituted therefor:

12. the noun “mine”, except as defined in Part IX, includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral or mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on, and all ways, works, machinery, plant, buildings and premises below or above ground belonging to or used in connection with the mine, and also any quarry, excavation or opening of the ground made for the purpose of searching for or

removal of mineral, rock, stratum, earth, clay, sand or gravel and any roasting or smelting furnace, concentrator, mill, work or place used for or in connection with washing, crushing, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any of such substances.

13. the verb "mine" and the word "mining", except as defined in Part IX, include any mode or method of working whereby the earth or any rock, stratum, stone or mineral-bearing substance may be disturbed, removed, washed, sifted, leached, roasted, smelted, refined, crushed or dealt with for the purpose of obtaining any mineral therefrom, whether it has been previously disturbed or not.

R.S.O. 1960,
c. 241, s. 1,
par. 18,
amended

(4) Paragraph 18 of the said section 1 is amended by inserting after "mine" in the fourth line "or plant" and by inserting after "mine" in the seventh line and in the ninth line "plant", so that the paragraph shall read as follows:

18. "owner", when used in Parts IX and XI, includes every person, mining partnership and company being the immediate proprietor or lessee or occupier of a mine or plant or a part thereof, or of any land located, patented or leased as mining land, but does not include a person or a mining partnership or company receiving merely a royalty, rent or fine from a mine, plant or mining lands, or being merely the proprietor of a mine, plant or mining lands subject to a lease, grant or other authority for the working thereof, or the owner of the surface rights and not of the ore or minerals.

R.S.O. 1960,
c. 241,
Pt. IX
(1961-62,
c. 81, s. 1),
re-enacted

2. Part IX of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

PART IX

OPERATION OF MINES

Interpre-
tation

161.—(1) In this Part,

- (a) "authorized" means properly authorized to perform any specified duty or to do any specified act;

- (b) “engineer” means a member of the Association of Professional Engineers of the Province of Ontario who is designated by the Department as “chief engineer” or as “district mining engineer”, or as “district electrical-mechanical engineer”;
- (c) “manager” means the owner of a mine or plant or a part thereof or his agent, or a person designated by the owner or his agent as responsible for the control, management and direction of a mine, plant or a part thereof;
- (d) the noun “mine” includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on and also any quarry, excavation or opening in the ground made for the purpose of searching for or removal of mineral, rock, stratum, earth, clay, sand or gravel, and any premises below or above ground belonging to or used in connection with the mine not included in the definition of the noun “plant”;
- (e) the verb “mine” and the word “mining” mean the performance of any work in or about a mine;
- (f) “mine rescue training officer” means a person in charge of a mine rescue station and responsible for mine rescue training;
- (g) the noun “plant” includes any roasting or smelting furnace, concentrator, mill or place and work used for or in connection with washing, crushing, grinding, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any substance included under the noun “mine” and all ways, works, machinery, buildings and premises above ground used in connection therewith;
- (h) “professional engineer” means a person who is a member of or is licensed by the Association of Professional Engineers of Ontario;

- (i) "qualified" means properly qualified to perform any specified duty or to do any specified act;
- (j) "safety" means freedom from injury to the body or freedom from damage to health of a person.

Responsi-
bility as to
qualifica-
tions

- (2) Subject to the requirements of this Act and except as otherwise provided in this Act, responsibility for the authorization and decisions as to the qualifications of employees rests with the employer or his agent. 1961-62, c. 81, s. 161.

Where Part
does not
apply

- (3) The provisions of this Part do not apply to cook-houses, bunkhouses, recreational centres, dwellings, and the grounds used in connection therewith. 1961-62, c. 81, s. 1, par. 12, *part, amended*.

EMPLOYMENT IN AND ABOUT MINES

Employ-
ment, of
children,

- 162.—(1) No male person under the age of sixteen years shall be employed in or about a mine or plant, and no male person under the age of eighteen years shall be employed underground in a mine or at the working face of an open-cut workings, pit or quarry.

of females

- (2) No female person shall be employed at a mine or plant, except on surface in a technical, clerical or domestic capacity or such other capacity that requires the exercise of normal feminine skill or dexterity but does not involve strenuous physical effort. 1961-62, c. 81, s. 162, *amended*.

MINE RESCUE STATIONS

Establish-
ment

- 163.—(1) Mine rescue stations shall be established, equipped, operated and maintained at such places and in such manner as the Minister directs. 1961-62, c. 81, s. 163 (1).

Mine rescue
training
officers

- (2) The Lieutenant Governor in Council may appoint such mine rescue training officers as he deems advisable.

Duty of
mine rescue
training
officers

- (3) The equipment and operation of mine rescue stations shall be in the charge of mine rescue training officers, and it is the duty of such officers to teach and train mine rescue crews and supervisors in the use and maintenance of the apparatus in such manner

as the chief engineer directs, to maintain the apparatus in efficient and workable condition so as to be available for immediate use, and to perform such other duties as the chief engineer deems necessary.

- (4) The owner, agent or manager of a mine shall cause such workmen and supervisors to be trained in the use and maintenance of mine rescue equipment as the district mining engineer deems necessary. 1961-62, c. 81, s. 162 (2-4), *amended*. ^{Training of rescue crews}
- (5) The mine manager is responsible for the supervision and direction of mine rescue crews in all mine rescue and recovery operations conducted at the mine. ^{Responsibility in mine rescue operations}
- (6) The cost of establishing, maintaining and operating mine rescue stations shall be paid out of the Consolidated Revenue Fund. ^{Cost}
- (7) The Workmen's Compensation Board shall at the end of each quarter year reimburse the Consolidated Revenue Fund from moneys assessed and levied by the Board against employers in the mining industry for the total amount certified by the Deputy Minister to have been paid out under subsection 6. ^{Idem}
- (8) All moneys received from the sale or disposal of any equipment, buildings or machinery forming part of or appertaining to mine rescue stations shall be paid to the Workmen's Compensation Board and shall be placed to the credit of the class funds of the employers in the mining industry. 1961-62, c. 81, s. 162 (5-8). ^{Disposal of equipment, etc.}
- (9) Fresh air bases shall be strategically located in deep mines and their design, locations, equipment and use are to be approved by the chief engineer. *New*. ^{Fresh air bases}

HOURS OF LABOUR UNDERGROUND

164.—(1) In this section,

^{Interpretation}

- (a) "shift" means a body of workmen whose hours for beginning and terminating work in the mine are the same or approximately the same;
- (b) "workman" means a person employed underground in a mine who is not the owner or agent or an official of the mine,

and, where any question or dispute arises as to the meaning or application of clause *b* of subsection 2 or as to the meaning of "shift", "workman", or "underground", the certificate of the engineer is conclusive.

Hours of
labour
under-
ground

- (2) No workman shall remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours, which eight hours shall be reckoned from the time he arrives at his place of work in the mine until the time he leaves such place, except that,

- (a) a shift or any part of a shift may remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours on one day of a week for the purpose of avoiding work on Sunday or on a holiday or changing shift;
- (b) such limit does not apply to a foreman, pumpman, cagetender, or any person engaged solely in surveying or measuring, nor does it apply in cases of emergency where life or property is in imminent danger, nor does it apply in cases of repair work.

Hours of
operator
of hoist

- (3) No person shall operate or be permitted to operate, either on the surface or underground, a hoist, by means of which persons or material are hoisted, lowered or handled in a shaft or winze, for more than eight hours in any consecutive twenty-four hours, except,

- (a) that, in the event of one of the regular hoistmen being absent from duty through sickness or otherwise and where no competent substitute is available, the remaining hoistman or hoistmen may work extra time not exceeding four hours each in any consecutive twenty-four hours for a period not exceeding fourteen days;
- (b) that, in the case where the work at a mine or in a shaft or winze at a mine is not carried out continuously on three shifts per day, the hoistman may work such extra time as is necessary for lowering or hoisting the workmen employed on the shift at the beginning and end of each shift;
- (c) in the cases provided for in clauses *a* and *b* of subsection 2. 1961-62, c. 81, s. 164 (1-3).

QUALIFICATIONS OF HOISTMEN

- 165.—(1) No person under the age of twenty-one years ^{Age limit of hoistmen} and no person who has not had adequate experience on a reversing hoist shall be authorized to operate a hoist at a shaft or winze in which persons are handled at a mine.
- (2) No person under the age of eighteen years shall be ^{Idem} authorized to operate a hoist at a mine.
- (3) No person shall operate or be permitted to operate a ^{Hoistman to be holder of medical certificate} hoist at a shaft or winze in which persons are handled at a mine, or for any other purpose designated by an engineer, unless he has been examined by a legally qualified medical practitioner acceptable to the employer and the medical practitioner has issued to him on the form prescribed a hoistman's medical certificate to the effect that to the best of the practitioner's knowledge the person is not subject to any infirmity, mental or physical (particularly with regard to sight, hearing and heart), to such a degree as to interfere with the efficient discharge of his duties. 1961-62, c. 81, s. 165 (1-3), *amended*.
- (4) Every hoistman's medical certificate lapses and shall ^{Expiry of certificate} be deemed to have expired at the end of one year from its date.
- (5) Every hoistman's medical certificate shall be kept ^{Filing of certificate} on file by the employer and made available to an engineer at his request.
- (6) A record of all hoistmen's medical certificates per- ^{Posting record of certificates} taining to hoistmen operating in any one hoistroom shall be kept posted therein, showing the names of the hoistmen and the date of the last certificate issued to each.
- (7) This section does not apply to the operation of ^{Automatic hoist} hoists when on automatic control. 1961-62, c. 81, ^{exempted} s. 165 (4-7).
166. Where a contravention of section 162, 164 or 165 ^{Proceedings where persons employed contrary to Act} takes place, the owner, agent or manager of the mine, or any of them, may be proceeded against, jointly or separately, and may be convicted of such offence, but neither the owner nor the agent nor the manager shall be so convicted if he proves that the offence was committed without his knowledge or consent, and that he had caused notices of the said sections to be posted up, and to be kept posted up, at some conspicuous place at or near the entrance to the mining work. 1961-62, c. 81, s. 166, *amended*.

MEDICAL EXAMINATIONS

Interpre-
tation

167.—(1) In this section,

- (a) “applicant” means a person who is not the holder of a certificate in good standing who is seeking employment in a dust exposure occupation;
- (b) “certificate” means an initial certificate, an extended certificate, an endorsed certificate, a miner’s certificate or a renewed certificate;
- (c) “dust exposure occupation” means,
 - (i) employment underground in a mine,
 - (ii) employment at the surface of a mine, other than at a pit or quarry, in ore or rock crushing operations where the ore or rock is not crushed in water or a chemical solution,
 - (iii) employment at other locations, as designated by the chief engineer, at the surface of a mine or in a pit or quarry;
- (d) “endorsed certificate” means an initial certificate or extended certificate that has been endorsed under clause *b* of subsection 7;
- (e) “extended certificate” means an initial certificate that has been extended under clause *a* of subsection 7;
- (f) “initial certificate” means a certificate issued to an applicant under subsection 6;
- (g) “medical officer” means a medical officer appointed under *The Workmen’s Compensation Act* to carry out the provisions of this Act with regard to the examination of employees or applicants for employment;
- (h) “miner’s certificate” means a certificate issued under subsection 8;
- (i) “renewed certificate” means a miner’s certificate that has been renewed under subsection 9.

R.S.O. 1960,
c. 437

- (2) No person shall be employed in a dust exposure occupation unless he is the holder of a certificate in good standing. Employment in dust exposure occupation
- (3) Subject to subsection 4, every certificate remains in force for not more than twelve months, except that a medical officer may at any time recall the holder of a certificate for examination within the scope of the existing certificate and may extend, endorse, renew or cancel the certificate in accordance with his finding upon the examination. Term of certificate
- (4) In those parts of Ontario where the examinations under subsections 6 to 9 are conducted by a travelling medical officer, no certificate shall be deemed to have expired because of the failure of the medical officer to conduct an examination prior to the date of expiration of a certificate, and the holder of a certificate that would otherwise have expired shall present himself before a medical officer for re-examination at the first opportunity available after the date upon which his certificate would have so expired. Examination by travelling medical officer
- (5) Where a certificate of a person employed in the mining industry has expired because of the failure of its holder to present himself to a medical officer for examination, a medical officer may extend, endorse or renew the certificate or issue a miner's certificate, as the circumstances of the case require, if he is satisfied that the failure was caused by the inability of the holder to so present himself because of illness or other circumstances beyond his control. Expiration of certificate
- (6) Every applicant shall be examined by a medical officer before commencing employment, and, if the medical officer finds upon examination that the applicant is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall issue to the applicant an initial certificate. Examination before employment
- (7) The holder of an initial certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall, Initial certificate holder, re-examination
- (a) in the case of a holder who since the issuance of his initial certificate has completed less than eleven months employment in a dust

exposure occupation, extend the certificate for such period as he deems necessary to permit the holder to complete twelve months employment in a dust exposure occupation, and he may from time to time extend the certificate for the same purpose; and

- (b) in the case of a holder of an initial certificate who since the issuance of his initial certificate has completed eleven months or more employment in a dust exposure occupation, endorse the certificate.

Issue of
miner's
certificate

- (8) The holder of an endorsed certificate who since the endorsement of his initial certificate has completed eleven months or more employment in a dust exposure occupation shall, prior to its expiration, present himself to a medical officer for examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall issue him a miner's certificate.

Miner's
certificate
holder, re-
examination

- (9) The holder of a miner's certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall renew the certificate, which may be further renewed from year to year upon the passing of a similar examination.

Unemployed
holder of
certificate

- (10) The holder of a certificate who for any reason is out of employment in a dust exposure occupation may apply to a medical officer for the extension, endorsement or renewal of his certificate or for the issuance of a miner's certificate, as the case may be, and, upon presentation of the holder's certificate, the medical officer shall conduct the required examination and effect such extension, endorsement, renewal or issuance as is warranted by his findings upon the examination.

Holder of
initial or
extended
certificate

- (11) Where the holder of an initial or extended certificate has been out of employment in the mining industry for a period exceeding one year and during such period has failed, through neglect on his part, to have his certificate extended or endorsed, such certificate is void and its holder is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only.

- (12) Where the holder of an endorsed certificate or miner's certificate has been out of employment in the mining industry for a period exceeding two years and during such period has failed, through neglect on his part, to obtain a miner's certificate or to have a miner's certificate renewed, his certificate is void and the holder thereof is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only. Holder of endorsed or miner's certificate
- (13) Where the holder of a certificate has been out of employment in the mining industry for a period exceeding three years, he is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only. Where un-employment exceeds three years
- (14) The manager or superintendent of the mine at which the holder of a certificate is employed may require the certificate to be delivered to and left in the custody of the manager or superintendent during the period of the holder's employment at the mine, but the certificate shall be returned to the holder upon the termination of his employment at the mine. Custody of certificate
- (15) The chief engineer may exempt from subsections 2 to 14 any mine or any person employed thereat where, in his opinion, the mine does not contain silica in quantity likely to produce silicosis or where for any other reason he is of the opinion that such subsections should not apply. Exemption
- (16) Subsections 2 to 14 do not apply to a person usually employed in a dust exposure occupation for less than fifty hours in each calendar month. Idem
- (17) The Lieutenant Governor in Council may make Regulations regulations,
- (a) prescribing the nature of the examination to be made by a medical officer under subsections 6 to 11;
 - (b) prescribing the forms of certificates and extensions, endorsements and renewals thereof;
 - (c) generally for the better carrying out of this section. 1961-62, c. 81, s. 167.

PROTECTION OF UNUSED WORKINGS

Shaft and
raise
openings

168.—(1) Where a mine has been abandoned or where the work in it has been discontinued, the owner or lessee or any other person interested in the mineral of the mine shall cause the top of any shaft or raise opening to the surface to be solidly bulkheaded with reinforced concrete at bedrock or on top of the concrete collar of such opening, except that where in the opinion of the district mining engineer this is impracticable, the requirements of subsection 2 apply.

All other
openings
and pits

(2) All other openings and pits, dangerous by reason of their depth or other conditions, shall be and shall be kept securely fenced or otherwise protected against inadvertent access to the satisfaction of the district mining engineer, but where in his opinion the mine or workings present no greater hazard than the natural topographic features of the area, this provision need not be complied with. 1961-62, c. 81, s. 168 (1), *amended*.

Failure to
erect fence
after notice

(3) Every such person who, after notice in writing from the district mining engineer, fails to comply with his directions as to such fencing or protection within the time specified in the notice is guilty of an offence against this Act.

When
engineer
may erect
fence

(4) Where the district mining engineer finds that any such fencing or protection is required in order to avoid danger to health or property, he may cause the work to be done and may pay the costs incurred out of any moneys provided for the purposes of this Act, and the amount of such costs with interest thereon is a lien upon the mine or mining work of which notice in such form as the Minister prescribes may be registered in the proper registry or land titles office, and no further transfer or other dealings with the mine or mining work shall take place until such amount is paid.

Recovery
of costs
of work

(5) The amount of such costs with interest thereon is due from the owner or lessee to the Crown and is recoverable at the suit of the district mining engineer in any court of competent jurisdiction.

Discharge
of fencing
liens

(6) Notwithstanding subsections 4 and 5, the Minister, either without payment or on such terms and conditions as he deems proper, may cause a cessation of charge to be registered in the proper registry or

land titles office, and thereupon the lien registered under subsection 4 is void and of no effect. 1961-62, c. 81, s. 168 (2-5), *amended*.

RESPONSIBILITY AS TO PROVISIONS

- 169.—(1) Where the owner, agent or manager of a mine or plant, by an application in writing stating the reasons therefor, requests the engineer to suspend the requirements of sections 172 to 596 as to such mine or plant, the chief engineer may in writing direct that the requirements of any such provision do not apply to such mine or plant, or may in writing direct that any such provision does not apply so long as such limitations and conditions as he sees fit to impose are observed or complied with. 1961-62, c. 81, s. 170 (1), *amended*. ^{Suspension of provision}
- (2) The chief engineer may at any time cancel any order made under subsection 1 or make such alterations therein as he deems proper in view of any change in the conditions under which the order was made or upon it appearing to him that such change is advisable for any other reason. 1961-62, c. 81, s. 170 (2). ^{Cancellation of suspension}
- (3) The manager of a mine or plant may make rules not inconsistent with any provision of this Part or any special direction made by an engineer as herein provided for the maintenance of order and discipline and the prevention of accidents in or about the mine or plant, and may submit any rule so made to the chief engineer who shall lay the rules before the Minister for his approval, and, upon such approval being given, the rules take effect after they have been posted up in a conspicuous place at the mine for at least fourteen days, but the Minister may disallow any of such rules or direct such changes to be made in them as he deems proper. 1961-62, c. 81, s. 170 (3), *amended*. ^{Manager may make rules}
- (4) Every such rule, after approval and when and so long as it is posted up and is legible, has the same force and effect as the provisions of this Act, and any person who contravenes any such rule is liable to the penalty provided for a breach of the provisions of this Act. 1961-62, c. 81, s. 170 (4). ^{Offence}
- (5) The owner or agent of an operating mine or plant shall appoint a manager who is responsible for the control, management and direction of the mine or plant. 1961-62, c. 81, s. 170 (5), *amended*. ^{Responsibility as to carrying out requirements}

Owner to
give facilities
to manager
to comply

- (6) The owner or agent shall provide the manager of a mine or plant with the necessary means and shall afford him every facility for complying with this Part. 1961-62, c. 81, s. 170 (8), *amended*.

Idem

- (7) Except as to any provisions that the chief engineer has directed are not applicable thereto,
- (a) the manager of the mine or plant shall take all necessary and reasonable measures to enforce the provisions of this Part and to ensure that they are observed by every employee of the mine or plant, and every supervisor shall take all necessary and reasonable measures to enforce the requirements of all such provisions as are applicable to the work over which he has supervision and to ensure that they are observed by the persons under his charge and direction;
 - (b) every person shall take all necessary and reasonable measures to carry out his duties in accordance with such provisions as are applicable to the work in which he is engaged; and
 - (c) every person through whose neglect or wrongful act a contravention occurs shall be deemed to have incurred the penalties provided for a breach of the provisions of this Part.

Idem

- (8) The manager of an operating mine or plant shall appoint one or more suitable persons who are responsible, during the manager's absence, for taking all necessary and reasonable measures to enforce the requirements of subsection 7. 1961-62, c. 81, s. 170 (6, 7), *amended*.

Operation
of
machines
and
devices

- (9) No manager, supervisor or his agent who has reasonable cause to believe that any machine or device in or about a mine or plant is unsafe or in contravention of this Act shall cause or permit it to be used or operated.

Idem

- (10) No person shall use or operate any machine or device in or about a mine or plant in an unsafe manner or in a manner that does not comply with this Act.

Idem

- (11) No person who has reasonable cause to believe that any machine or device, which has been assigned to him for use in or about a mine or plant, is unsafe

or in contravention of this Act shall use the machine or device until he has,

- (a) reported the defect to his supervisor; and
 - (b) obtained specific authority from his supervisor to use or operate the machine or device. *New.*
- (12) Where work in or about a mine or plant is let by the owner, agent or manager to a contractor, Responsi-
bility
of
contractors,
etc.
- (a) the owner, agent or manager shall, except for work involving surface prospecting, give written notice to the chief engineer and to the district mining engineer, resident in that part of Ontario in which the mine or plant is situated that a contract has been made;
 - (b) the contractor shall give written notice to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine is situated of any subcontract that has been made;
 - (c) the contractor or subcontractor, as the case may be, shall appoint a person to be in charge and responsible for the work being done by the contractor or subcontractor;
 - (d) the person so appointed by the contractor or subcontractor shall comply and enforce compliance with all the provisions of this Part pertaining to the work over which he has control and is, in any case of non-compliance therewith, guilty of an offence and punishable in like manner as if he were the owner, agent or manager. 1961-62, c. 81, s. 170 (9), *amended.*

REQUIREMENTS

170. Subject to section 169, sections 172 to 596 shall be observed and carried out at every mine and plant. Require-
ments
1961-62, c. 81, s. 171, *amended.*

171. In sections 172 to 596,

- (a) "blasting agent" means a type of explosive of low sensitivity that cannot, as mixed and packaged for use, be detonated by a single No. 8 detonator, and, unless specified, the requirements for explosives do not apply to a blasting agent; Interpre-
tation

- (b) "boatswain's chair" means a suspended scaffold in the form of a seat used by one person in a sitting position and supported by slings attached to a suspended rope, and includes the wearing of a safety belt by the person;
- (c) "charge" means,
 - (i) explosives and a detonator,
 - (ii) a blasting agent and a detonator, or
 - (iii) a blasting agent and a detonator and primer that is exploded as a single unit;
- (d) "drum hoist" means the type of hoist that spools the rope on the hoist drum;
- (e) "explosives" includes detonators and those powders that are cap sensitive with a single detonator as packaged for use, and includes black blasting powder;
- (f) "fire-resistive" when applied to buildings, structures or parts thereof, means constructed in an approved manner of steel, masonry, reinforced concrete, or other equivalent materials, or any combination of such materials;
- (g) "friction hoist" means the type of hoist where the rope is driven by the friction between it and the drum tread and where the rope is not spooled on the hoist drum but passes over or around it;
- (h) "safety belt" means a belt worn round the waist of a person and includes the rope and necessary fittings attached to the belt, which shall be suitable for their purpose, and the safety belt shall be of sufficient strength to absorb twice the load of energy which, under the circumstances of its use, could be transmitted to it;
- (i) "safety harness" means a combination of a belt worn round the waist of a person and straps attached to the belt and passing over the person's shoulders, with the necessary rope fittings and assembly that meets the

strength requirements of a safety belt and is suitable for raising the person by the rope without permitting the body of the person to bend at the waist;

- (j) "shot" means the sound of a charge or charges being exploded;
- (k) "therm-hour" means 100,000 British thermal units per hour or 39.3082 brake horse-power;
- (l) "utility hoist", including "tugger hoist" other than a hoist designated as a "construction hoist", means a powered hoist used for handling materials only in or about a mine or plant, and the safety requirements may be designated by the district electrical-mechanical engineer according to the conditions of use,

and the decision of an engineer as to whether or not a situation complies with a requirement therein in which "suitable", "adequate", "approved", or any expression of like import, is used and as to the meaning and application of any such expression is final and conclusive, and a certificate of any such decision signed by the engineer may be used as evidence in any court. 1961-62, c. 81, s. 172, *amended*.

- 172.—(1) It is the duty of every manager, supervisor or other person in charge of workmen and every hoistman, deckman, conveyance attendant or person who handles explosives or blasting agents or who operates, installs or maintains any equipment, machinery or electrical apparatus in or about a mine or plant, to know the requirements of this Part that apply to the work under his charge and direction or in which he is engaged. ^{Duty as to knowledge of requirements}
- (2) Every person who is engaged exclusively in supervising the work of other persons, shall be able to give and to receive and understand orders in the English language. ^{Knowledge of English language}
- (3) Every person in charge as a deckman, conveyance attendant or hoistman shall have a knowledge of the English language adequate for enabling him to carry out his duties in a thoroughly safe manner. 1961-62, c. 81, s. 173, *amended*. ^{Idem}

PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

Safety
hats and
footwear

173.—(1) An approved safety hat and approved safety footwear shall be worn by every person employed,

(a) underground in a mine;

(b) in a location in a pit or quarry designated by the district mining engineer.

Designated
areas for
protective
equipment

(2) The manager shall designate such other areas or occupations and circumstances where any or all of the following items shall be worn by every person employed therein:

1. Approved safety hat.

2. Approved safety footwear.

3. Approved eye protective equipment.

4. Approved hearing protective equipment.

5. Approved breathing apparatus.

6. Any other approved personal protective equipment which the job in question may require.

Hearing
protection

(3) The manager shall ensure that all steps practicable are taken to prevent injury to the hearing of a person from excessive noise.

Masks,
respirators,
etc.

(4) Where applicable, masks or respirators of an approved type and design for the hazard involved shall be worn by persons who are exposed to dust, gases, or irritating and dangerous fumes.

Idem

(5) Every person shall properly maintain his mask or respirator.

Idem

(6) Emergency breathing apparatus, where required, shall be maintained in condition for immediate use, and,

(a) the manager shall designate a responsible person to regularly inspect, sterilize and perform any necessary maintenance on such apparatus; and

(b) such apparatus, when not in use, shall be stored in a dust-tight container.

- (7) There shall be provided and maintained in safe ^{Safety belts, etc.} condition safety belts or safety harnesses for the use of persons where necessary.
- (8) Every person shall properly maintain his safety belt ^{Idem} or safety harness.
- (9) Every person employed at a mine or plant shall, ^{Duty to wear safety equipment}
- (a) use or wear the personal protective clothing and equipment required by this Part; and
 - (b) properly maintain his personal protective clothing and equipment. *New.*

FIRE PROTECTION — MINES

174. Sections 175 to 195 and sections 559 to 563 apply at ^{Application of ss. 175-195 and ss. 559-563} mine operations underground and in the vicinity of shaft collars. *New.*
- 175.—(1) General procedure to be followed both on sur- ^{Procedure} face and underground in case of fire underground or in a mine plant building that may endanger the mine entrance shall be drawn up, and all persons concerned shall be informed and kept informed of their duties.
- (2) Copies of the procedure or suitable excerpts shall be ^{Posting} kept posted in the shafthouse and other prominent places. 1961-62, c. 81, s. 174 (1, 2).
- (3) A test of the effectiveness of such procedure shall be ^{Tests} made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 174 (4), *amended.*
- 176.—(1) Every mine worked from shafts or adits pro- ^{Stench warning} ducing over 100 tons of ore per day and such other mines as are designated by the district mining engineer shall be equipped with an approved apparatus for the introduction into the mine workings of ethyl mercaptan or other warning gas or material approved by the chief engineer, and such apparatus shall be available at all times in a suitable location and kept ready for instant use for the purpose of warning persons underground of any emergency necessitating a speedy evacuation of the workings.

- | | |
|------------------------------------|---|
| Idem | (2) A test of the effectiveness of the warning and procedure described in subsection 1 shall be made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 175 (1, 2), <i>amended</i> . |
| Idem | (3) Every person employed underground shall have the meaning of the warning explained to him, and he shall be acquainted with the smell of the warning gas. <i>New</i> . |
| Flammable refuse | 177.—(1) No flammable refuse shall be allowed to accumulate underground but shall be removed from the workings at least once a week and brought to the surface and there disposed of in a suitable manner. 1961-62, c. 81, s. 176 (1). |
| Idem | (2) No flammable refuse shall be allowed to accumulate in or about a headframe, shafthouse or any plant building in which a fire may endanger the mine entrance. |
| Idem | (3) Suitable fire-resistive containers for the temporary disposal of flammable refuse such as scrap paper, oily waste, rags and other similar materials shall be provided at all shaft stations, underground shops, lunch rooms and enclosures necessary for the housing of machinery or equipment or stores and buildings mentioned in subsection 2, and such containers shall be regularly emptied. 1961-62, c. 81, s. 176 (2, 3), <i>amended</i> . |
| Unused timber | (4) All timber not in use in a mine shall, as soon as is practicable, be taken from the mine and shall not be piled up and permitted to decay therein. |
| Certificate as to flammable refuse | (5) Every shift boss or mine captain shall certify in writing to the mine manager at least once a week that there is no accumulation of flammable refuse underground in the area under his supervision except as reported by him. |
| Storage of oil and grease | (6) Oil, grease or other flammable material shall not be stored in a shafthouse or portalhouse, but it is permissible, if adequate precautions are taken, to have in the shafthouse or portalhouse, for distribution only, an amount not exceeding the requirements for one day's operation. |

- (7) Volatile, flammable liquids shall not be stored in a shafthouse or portalhouse and such material shall be transported underground only in approved types of containers. ^{Volatile, flammable liquids}
- (8) Oil, grease or volatile flammable liquid while underground shall be contained in suitable receptacles, and the amount of oil or grease so kept underground shall not exceed the requirements for seven days and the amount of volatile flammable liquid kept underground shall not exceed the requirements for the current day's work. 1961-62, c. 81, s. 176 (4-8). ^{Oil and grease underground}
- (9) The transfer of liquid fuels from one container to another by the direct application of air under pressure shall not be permitted, except where properly designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 194 (3). ^{Idem}
178. No person shall build, set or maintain a fire underground for any purpose unless he has proper authority and suitable instructions for so doing, and only after the necessary fire-fighting equipment has been provided. 1961-62, c. 81, s. 177. ^{Building fires prohibited}
179. Where open-flame lights are used at a mine not equipped with a headframe and shafthouse or portalhouse constructed of fire-resistive materials, the interior of the shafthouse or portalhouse shall be tightly sheeted with metal or a suitable fire-resistive material to a height of eight feet. 1961-62, c. 81, s. 178. ^{Open-flame lights, precautions}
180. All underground shops, lunch rooms and buildings or enclosures necessary for the housing of machinery and equipment and stores and the furnishings of such shall be so located, constructed and maintained as to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 179. ^{Underground structures}
- 181.—(1) If the engineer is of the opinion that a fire hazard may be created at a mine by smoking, or by the use of open-flame lamps, matches, or other means of producing heat or fire, he may designate the mine or part or parts of the mine as a fire hazard area. ^{Fire hazard areas}
- (2) No person shall smoke or be allowed to smoke, use open-flame lamps, matches or other means of producing heat or fire in such areas except with the permission in writing of the engineer and under such conditions as he deems proper. ^{Idem}

- Idem (3) Such fire hazard areas shall be properly identified by suitable warning signs. 1961-62, c. 81, s. 180 (1-3).
- Idem (4) The manager shall cause such signs to be installed and maintained as long as the area is so designated. 1961-62, c. 81, s. 180 (4), *amended*.
- When flammable gas encountered in mine 182. When a flammable gas in dangerous concentrations has been found to exist in a mine working, such working or the parts of such working concerned shall immediately be considered a fire hazard area, and every precaution shall be taken while clearing the area or doing any work therein to prevent ignition of the gas and these precautions shall be continued as long as the hazard exists. 1961-62, c. 81, s. 181.
- Fire-fighting equipment 183.—(1) Suitable fire-fighting equipment shall be provided and maintained in or about every headframe, shafthouse, portalhouse and every plant building in which a fire may endanger the mine entrance and at every shaft or winze station underground. 1961-62, c. 81, s. 182 (1), *amended*.
- Idem (2) Suitable fire-fighting equipment shall be provided and maintained at all underground crushers, pump stations, tipples and underground electrical installations except where, in the opinion of the engineer, no fire hazard exists. 1961-62, c. 81, s. 182 (2).
- Idem (3) A properly authorized person or persons shall make a monthly inspection of all fire-fighting equipment referred to in subsections 1 and 2, and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3), *amended*.
- Storage of carbide 184.—(1) Calcium carbide shall be stored on the surface only, in a suitable, dry place, other than the shaft-house or portalhouse or changehouse, and in its original unopened container.
- Distribution of carbide (2) For the purpose of distributing calcium carbide, adequate provisions for the handling of quantities not in excess of one day's supply or 100 pounds, whichever is the greater, shall be made at every mine.
- Idem (3) Such distribution shall not take place in a shaft-house, portalhouse or changehouse unless such structure is fire-resistive but shall be provided for by the

installation of a suitable distribution centre not closer than fifty feet to the nearest point of any part of the headframe, shafthouse or portalhouse.

- (4) Adequate precautions shall always be taken to ensure that calcium carbide is handled in a safe manner and no calcium carbide shall be taken underground except in suitable containers. 1961-62, c. 81, s. 183. Handling of carbide
185. Where operations involving the use of acetylene, kerosene, gasoline or other torches are conducted in a headframe, shafthouse, portalhouse or other building in which a fire may endanger the mine entrance or the underground workings of a mine, suitable measures for protection against fire shall be adopted and rigidly adhered to. 1961-62, c. 81, s. 184. Fire protection where torches used
- 186.—(1) Where cylinders of compressed gas, such as acetylene and oxygen, are transported underground for any cutting or welding operation, all fittings, such as regulators and manifolds, shall be disconnected from the cylinders and the valves shall be protected in a suitable manner. 1961-62, c. 81, s. 185. Underground transportation of compressed gases
- (2) Any such removable protective device shall be replaced at any time a cylinder is left unattended or before a cylinder is moved to a new location. 1961-62, c. 81, s. 185 (1, 2). Idem
- (3) In all cases where cylinders of compressed gas are operated from within any cage, skip or other shaft conveyance, or where the cylinders are set up in a location not readily accessible to the person operating the nozzle equipment, a second competent person shall be employed at all times to attend to the operation of the cylinder-control devices. 1961-62, c. 81, s. 185 (3), *amended*. Operation of welding and cutting torches
- (4) In all cases where cylinders of compressed gas are used underground for the purpose of supplying cutting or welding equipment, special precautions shall be observed to avert the possibility of damage to or failure of the regulators, manifolds and hoses used in conjunction with the equipment. 1961-62, c. 81, s. 185 (4). Compressed gas
187. No device for the generation of gas, such as acetylene for supplying cutting or welding equipment, shall be used in the underground workings of a mine. 1961-62, c. 81, s. 186. Generation of gas underground forbidden

Escape-
ment exit

188.—(1) In every mine where a vertical or inclined shaft has been sunk or an adit driven and stoping has commenced, there shall be provided and maintained, in addition to the hoisting shaft or the opening through which persons are let into or out of the mine and the ore extracted, a separate escapement exit. 1961-62, c. 81, s. 187.

Location
and cover
of exit

(2) Such exit shall be outside any structure covering the main entrance to the mine and shall be isolated by a distance of not less than one hundred feet from the main entrance.

Idem

(3) Any structure covering such exit shall be of such material and so constructed to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 187 (1, 2), *amended*.

When
necessary

(4) If such an escapement exit is not in existence at the time that stoping is commenced, work upon it shall be begun as soon as stoping is commenced and shall be diligently prosecuted until it is completed, and means of escapement, other than the main outlet of the mine, shall be provided to and connected with the lowest level on which stoping operations are being carried on.

Size of
exit

(5) The escapement exit shall be of sufficient size to afford an easy passageway and, where necessary, shall be provided with good and substantial ladders from the deepest workings to the surface.

Monthly
exit
inspection

(6) The manager shall depute some competent person or persons to make an inspection of such escapement exit at least once a month.

Record of
inspection

(7) A record of such inspection and the conditions found shall be made in writing by the person making it. 1961-62, c. 81, s. 187 (3-6).

Legible
signs
showing
exits

(8) Legible signs showing the way to escapement exits shall be posted in prominent places underground and all persons employed underground shall be instructed as to the location of the escapement exits. 1961-62, c. 81, s. 187 (7), *amended*.

Buildings
in
proximity
to mine
entrance

189. Unless there is first provided a second means of exit from the mine workings, no building of other than fire-resistive construction shall be erected within fifty feet of any closed-in part of a headframe or

portalhouse, except that the building housing the hoist and power plant equipment may be erected within this distance so long as such distance is not less than thirty-five feet. 1961-62, c. 81, s. 188.

190. No steam boiler or diesel engine shall be installed in such a manner that any part thereof is within seventy-five feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 190. Location of
boilers and
diesel
engines
191. No gasoline or other internal combustion engine using highly volatile liquids or flammable gases shall be installed within fifty feet of the building housing the hoist nor within 100 feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 191. Location of
internal
combustion
engines
- 192.—(1) Except for the actual fuel tanks of operating equipment, no storage of gasoline or liquid fuel shall be permitted within 100 feet of the collar of a shaft or other entrance of a mine. Storage of
liquid fuels
- (2) The natural drainage from such a location shall be such that the flow is in a direction opposite to the location of any such shaft or mine entrance. 1961-62, c. 81, s. 192. Idem
- 193.—(1) Where practicable, there shall be a sufficient number of suitable fire doors installed underground to cut off the shaft and the mine openings directly associated with it from the other workings of the mine. 1961-62, c. 81, s. 195 (1), *amended*. Fire doors
- (2) Fire doors shall be maintained in proper order and kept clear of all obstructions so as to be readily usable at all times. 1961-62, c. 81, s. 195 (2). Properly
maintained
194. Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may order refuge stations to be provided and maintained at such places in the mine as he directs, and every such refuge station shall have water, air and telephone connections to the surface and be separated from the adjoining workings by closeable openings so arranged and equipped that gases can be prevented from entering the refuge station. 1961-62, c. 81, s. 196, *amended*. Refuge
stations

Connection
between
mines

195.—(1) Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may recommend in writing to the Minister that a connection between mines be established at such places as he deems advisable and he may further recommend that such connection be so made and equipped as to constitute a refuge station or refuge stations. 1961-62, c. 81, s. 197 (1), *amended*.

Idem

(2) Upon the approval by the Minister of any such recommendation, a copy thereof, accompanied by a copy of this section, shall be served personally upon or sent by registered mail to the owner or the agent and the manager of each of the mines affected. 1961-62, c. 81, s. 197 (2).

Committee

(3) Upon the approval of such a recommendation of the chief engineer, the Minister may in writing signed by him direct each of the mining companies concerned to appoint a representative to act in its behalf on a committee under the chairmanship of a third party, who shall be a mining engineer recommended by the chief engineer and appointed to the chairmanship of the committee by the Minister, and the committee shall determine,

(a) the design, specifications and location of the connecting passages, bulkheads or other structures to be constructed in order to safeguard the present and future operations of the mines affected;

(b) the work to be done by each of the mines affected and the proportion in which the cost of the work and of establishing and maintaining the connection shall be borne by the owners or agents of the mines affected;

(c) the time at which the work in compliance herewith shall be commenced and completed;

(d) the proportion in which the costs and expenses of the committee shall be borne by the owners or agents of the mines affected; and

(e) such other provisions or requirements as in the premises they deem necessary or advisable. 1961-62, c. 81, s. 197 (3), *amended*.

- (4) The committee shall submit a report in writing to the Minister, and a report of the majority of the committee shall be deemed to be the finding of the committee. ^{Idem}
- (5) Upon the approval by the Minister of the report of the committee, the chief engineer may issue his order for the establishment and maintenance of such connection and refuge station or stations (if any are recommended) in accordance with the terms of the report. ^{Idem}
- (6) A copy of the report shall be attached to the order and forms a part thereof. ^{Idem}
- (7) No such order is subject to appeal upon any ground whatsoever and is enforceable in the same manner as any order of the chief engineer. 1961-62, c. 81, s. 197 (4-7). ^{Idem}

FIRE PROTECTION — PLANTS

- 196.—(1) Suitable fire-fighting equipment shall be provided and maintained in or about every plant building. 1961-62, c. 81, s. 182 (1), *amended*. ^{Fire-fighting equipment}
- (2) Procedures for fighting fire in plant buildings shall be drawn up and suitable signs pertaining to and excerpts from the procedures shall be kept posted in prominent places. 1961-62, c. 81, s. 174 (3), *amended*. ^{Idem}
 - (3) A properly authorized person or persons shall make a monthly inspection of all fire-fighting equipment and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3). ^{Idem}
- 197.—(1) Where an internal combustion engine is installed at a plant, provision shall be made for safely conducting the exhaust of such engine to a point well outside the building. 1961-62, c. 81, s. 192 (1), *amended*. ^{Exhaust of internal combustion engines}
- (2) The exhaust shall be so arranged as to avert the possibility of fumes re-entering the building or entering the intake of an air compressor or contaminating the atmosphere of any adjacent buildings or mine workings. 1961-62, c. 81, s. 192 (2). ^{Idem}

Transfer of
liquid
fuel

198.—(1) The fuel tanks of an internal combustion engine installed in a building shall be so arranged that the actual transfer of fuel to the fuel tank takes place at a point outside the building and the fuel is conducted to the tank in a tightly-jointed pipe or conduit.

Idem

(2) Similar provisions for the escape of displaced air from the fuel tank shall be made whereby the displaced air will be conducted to a safe point outside the building before being discharged into the atmosphere. 1961-62, c. 81, s. 194 (1, 2).

Dangerous
materials

199. Any dangerous, flammable or explosive material or substance in a solid, liquid or gaseous state or any combination of them, other than manufactured explosives and blasting agents, that is kept, stored or handled, in a plant,

(a) shall be kept in a container that is suitable having regard to the nature and state of the material or substance; and

(b) shall be kept apart or insulated from any reasonably foreseeable source of ignition or from temperatures likely to cause combustion,

and where the material or substance is kept, stored or handled for a purpose other than immediate use, it shall be kept, stored or handled,

(c) outside any building;

(d) in a building not used for any other purpose; or

(e) in a fire-resistive compartment satisfactory to the district mining engineer as to location and construction. *New.*

Exits

200.—(1) All plant buildings, except those used for the storage of explosives and blasting agents, shall be provided with adequate and properly maintained means of egress, convenient to and having easy communication with all rooms, regularly occupied by a person, including,

(a) tower stairs of fire-resistive construction equipped with fire-resistive doors and hardware, satisfactory to an engineer, at each storey including the basement; and

- (b) where permitted by an engineer, metal or other non-combustible fire escapes consisting of exterior stairways with railings and with landings at each storey connecting directly with the interior of the building through metal or other fire-resistive doors.
- (2) No means of egress from a plant building shall be obstructed and no door to a fire escape, tower stair or other smoke-proof enclosure shall be prevented from closing or remaining closed. Idem
- (3) Notwithstanding that a door is locked to prevent ingress to a building or room, the door shall be deemed to be not locked, bolted or barred if it is provided with a mechanism for unlocking it quickly from the inside that requires no special skill, effort or previous knowledge for its operation. *New.* Idem

201. Where,

Dangerous
material

- (a) any grinding, polishing, screening or other process is likely to produce dust or other particles of such size or character and to such an extent as to be capable of producing a flammable mixture; or
- (b) any mixing, handling, dispensing or storage of any material is likely to produce a gas, vapour or mist of such character and to such extent as to be capable of producing a flammable mixture,

all practicable steps shall be taken to,

- (c) enclose the equipment used in the process;
- (d) prevent or remove any accumulation of dust, vapour, gas or mist that may escape from the enclosure;
- (e) exclude or effectively enclose all potential sources of ignition of the flammable mixture;
- (f) restrict the spread and effects of any burning or explosion by the provision of vents, baffles and chokes or other devices satisfactory to an engineer; and

- (g) when so directed by an engineer create and maintain an inert atmosphere in contact with dust or other particles mentioned in clause *a* or mixed with the gas, vapour or mist mentioned in clause *b*. *New*.

AID TO INJURED

- | | |
|--------------------|--|
| Stretchers | 202.—(1) At every mine or plant, there shall be maintained a sufficient number of properly-constructed stretchers for the proper handling and transporting of persons who are injured. |
| First aid supplies | (2) There shall be provided and maintained at every mine or plant, for the treatment of any person injured such first aid supplies as are required by the regulations under <i>The Workmen's Compensation Act</i> , 1961-62, c. 81, s. 198, <i>amended</i> . |
- R.S.O. 1960,
c. 437

ENVIRONMENTAL CONDITIONS

SANITATION — MINES

- | | |
|------------------------------|--|
| Sanitary conveniences, mines | 203. There shall be provided in the workings of a mine suitable sanitary conveniences in accordance with the following requirements: |
|------------------------------|--|
1. Where persons are employed underground, one sanitary convenience for every twenty-five persons or portion thereof on any shift.
 2. The sanitary conveniences mentioned in item 1 shall be conveniently placed, having regard to the number of persons employed on the different levels, in a well-ventilated part of the mine.
 3. Where persons are employed at an open pit or a clay, sand or gravel pit or quarry, one sanitary convenience and one urinal for every twenty-five persons or portion thereof on any shift.
 4. The sanitary conveniences mentioned in items 1 and 3 shall be kept clean and sanitary and the content disposed of regularly. 1961-62, c. 81, ss. 206, 207, *amended*.

204. Any person depositing faeces in any place under-^{Idem}ground, other than in a sanitary convenience provided, is guilty of an offence against this Act. 1961-62, c. 81, s. 208.
205. A supply of potable water shall be provided in mine^{Drinking water} workings on surface and at points underground reasonably accessible to the working places. 1961-62, c. 81, s. 209, *amended*.
- 206.—(1) If persons are employed underground or in hot^{Dressing rooms} or dusty occupations on surface at a mine, suitable and sufficient accommodation, including supplies of clean, cold and warm water for washing themselves, shall be provided above-ground near the principal entrance of the mine to enable such persons to conveniently dry and change their clothes.
- (2) Such accommodation, unless of fire-resistive construction, shall not be nearer than fifty feet to a shafthouse or portalhouse and it shall not be located in a hoistroom or boilerhouse unless a separate, properly-constructed room is provided. 1961-62, c. 81, s. 210, *amended*.

SANITATION — PLANTS

- 207.—(1) There shall be provided in every plant suitable,^{Sanitary conveniences, plants} separate wash and toilet rooms for male and female persons that are conveniently accessible and in accordance with the following requirements:
1. Where fewer than six persons are employed, a room containing a wash basin and a flush toilet and having a door that has a locking device on the inside.
 2. Where six or more persons are employed, there shall be provided for the number of employees of each sex in a group itemized in column 1 of the Table not less than the number of separate flush toilets and separate wash basins for each sex opposite thereto in column 2.

TABLE

Item	COLUMN 1		COLUMN 2	
	No. of male Employees	No. of female Employees	No. of	
			Toilets	Wash-basins
1	1 to 9	1 to 9	1	1
2	10 to 24	10 to 24	2	2
3	25 to 49	25 to 49	3	3
4	50 to 74	50 to 74	4	4
5	75 to 100	75 to 100	5	5
6	Over 100	Over 100	Add one toilet and one wash basin for each additional thirty employees or fraction thereof.	

3. Notwithstanding item 2,

- i. in toilet rooms for more than nine male employees, urinals shall be substituted for not less than one-quarter and not more than one-half of the number of flush toilets required by item 2, or
- ii. in toilet rooms for more than nine female employees, urinals may be substituted for not more than one-half of the number of flush toilets required by item 2.

4. Subject to item 3, urinals or wash fountains in straight trough form and wash fountains in circular form may be provided in lieu of toilets or wash basins, as the case may be, and,

- i. where a circular wash fountain is provided, each twenty inches of its circumference is deemed to be the equivalent of one wash basin, and
- ii. where a urinal or wash basin in straight trough form is provided, each twenty-four inches of its length is deemed to be the equivalent of one toilet or one wash basin, as the case may be.

- (2) Where wash fountains or wash basins are provided, ^{Wash basins} they shall be supplied with hot and cold water from taps or outlets that are satisfactory to an engineer.
- (3) Water for washing purposes, ^{Hot water}
- (a) shall not exceed 140° Fahrenheit at any outlet; and
- (b) shall not be mixed directly with steam.
- (4) Where the municipality in which the plant is located ^{Where privies permissible} is not serviced by a water or sewage system and flush toilets cannot be provided, privies or other toilets satisfactory to an engineer shall be provided.
- (5) Every toilet for employees and every urinal for ^{Requirements for toilets} female employees shall occupy an individual compartment with a suitable door and lock and the compartment shall have a length of not less than four feet six inches and a width of not less than two feet eight inches.
- (6) The height of any compartment door, wall or partition ^{Idem} between toilets for employees and between urinals for female employees may be less than the height of the room but the top of the door or partition shall be not less than five feet six inches from the floor and the bottom not more than one foot from the floor.
- (7) Every compartment shall be supplied with a clothes ^{Idem} hook.
- (8) Every toilet room and washroom shall be adequately ^{Lighting} lighted and kept in good repair and in a sanitary condition.
- (9) Toilets, urinals and other sanitary conveniences shall ^{Repair} be kept in good repair and in a sanitary condition.
- (10) Toilet rooms and washrooms shall, ^{Requirements for toilet rooms and washrooms}
- (a) have legible signs indicating for which sex the room is provided and be constructed so as to prevent a view of the facilities from outside

the room and so as to prevent, as far as is practicable, accidental entry into the room by a person of the opposite sex;

- (b) have provided and maintained for the use of persons a convenient and sufficient supply of clean towels or suitable air dryers, soap or other suitable cleansing agent, toilet paper and in each toilet room used by females a suitable covered receptacle;
- (c) be, where separated, adjacent and connected with a door or doorway;
- (d) have a ceiling height of not less than eight feet with the enclosing walls extended to the ceiling and constructed of material impervious to liquid to a height of not less than four feet;
- (e) have mechanical exhaust to the outdoors at a volume of not less than two cubic feet per minute for each square foot of the floor area of the room, or that have windows or skylights so constructed that, for each toilet and for each urinal in the room, not less than two square feet of the window or skylight can be opened;
- (f) have an opaque window or skylight where necessary to ensure privacy;
- (g) have smooth floors of terrazzo, vitrified tile, mastic tile, asphalt or other equally non-absorbent, easily cleaned material. *New.*

Drinking
water

208. There shall be provided:

1. A supply of potable water in a place where the tap or outlet is distant from any sanitary convenience and, where the supply is not taken directly from a water pipe, the supply shall be contained in a covered vessel having a drain faucet and shall be renewed at least daily.
2. Where the potable water is not delivered in an upward jet from which the employees can

conveniently drink, a sufficient supply of individual drinking cups located near the tap or outlet.

3. Except where otherwise permitted by an engineer, at least one tap or outlet for drinking water on every floor where work is regularly performed and within 300 feet of every employee's normal work station. *New.*

209. There shall be provided:

Change
rooms

1. Such dressing rooms as an engineer may direct.
2. Suitable accommodation for clothing not worn by employees during working hours and for work clothes that must be kept separate from street clothes because of the presence of poisonous, irritating or infectious materials.
3. Where necessary, adequate facilities for drying work clothes. *New.*

210.—(1) There shall be provided where thirty-five or more persons are employed or working in a plant, or an engineer so directs in writing, a room, area or place for eating purposes together with equipment satisfactory to an engineer. Lunch
areas

(2) The employer shall ensure that no person takes food into or eats in a room, area or place where any poisonous substances are exposed or where deleterious vapours, mists, fumes, dust or gases are known to be present or any room, area or place designated by an engineer, and shall ensure that potable water in any such room, area or place is taken directly from a water pipe or fully enclosed container. Idem

(3) No person shall take food into or eat in a room, area or place referred to in subsection 2. *New.* Idem

211. An engineer may, with respect to a plant in operation before the requirements of sections 207 to 210 came into force, permit the continued use of such sanitary facilities satisfactory to him that are in use therein notwithstanding that such facilities do not comply with the requirements of the said sections. *New.* Existing
plants

Lighting

212. Sufficient and suitable natural or artificial lighting without unnecessary glare or shadows shall be provided and maintained where persons are working or passing in a plant. *New.*

VENTILATION AND DUST CONTROL — MINES

Pure air required

- 213.—(1) The ventilation in every mine shall be such that the air in all of its workings, which are in use shall be free from dangerous amounts of noxious impurities and shall contain sufficient oxygen to obviate danger to the health of anyone employed in the mine.

Mechanical ventilation systems

- (2) In mine workings where air as described in subsection 1 cannot be obtained by natural ventilation, approved means for mechanical ventilation shall be provided and kept in operation until the workings have been abandoned or until satisfactory natural ventilation has been brought about therein. 1961-62, c. 81, s. 203 (1, 2), *amended.*

Use of fans

- (3) All structures containing fans used in connection with the underground ventilation of a mine shall be of such construction as to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 203 (3).

Heating mine air

- (4) Any proposed method of heating the underground mine ventilating air shall be submitted for approval to the district electrical-mechanical engineer.

Direct-fired heaters

- (5) Any proposed method of heating air at a mine, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer. *New.*

Underground workings, examination of air

- (6) Underground workings that are not in a positive ventilation circuit shall be examined before being used in order to ascertain whether dangerous gases have accumulated there or whether an oxygen deficiency exists, and only such persons as are necessary to make the examination shall be allowed to proceed to such places until the workings are safe to work or travel in.

Idem

- (7) Such workings shall be barricaded off and posted with signs which warn persons of the hazard.

Idem

- (8) Only authorized persons shall enter such posted workings. 1961-62, c. 81, s. 204, *amended.*

- (9) No internal combustion engine shall be installed or operated in a shaft or adit or in any working in connection with a shaft or adit unless permission in writing from the chief engineer is first obtained. 1961-62, c. 81, s. 205 (1). Internal combustion engine underground
- (10) Every place in a mine, where drilling, blasting or other operations produce dust in dangerous quantities, shall be adequately supplied at all times with clean water under pressure or other approved appliance for laying, removing or controlling dust. Keeping water supply to lay dust
- (11) A development heading, such as a drift, cross-cut, raise or sub-drift, shall be furnished with an approved water blast which shall discharge within an effective distance of the face being advanced and shall be applied so as to wet the area for at least fifteen minutes after blasting, and, if such area is not thoroughly wetted prior to the entry of any person it shall be wetted down as soon as possible. 1961-62, c. 81, s. 280 (1, 2). Approved water blast
- (12) A fresh air supply independent of the air supplied to any machine or drill used therein shall be provided, Auxiliary air supply
- (a) in every raise;
- (b) in every sub-drift over twenty-five feet in length; and
- (c) in every stope with one entry and no through ventilation,
- and such fresh air supply shall be controlled outside or at the beginning of the heading, and the air shall be turned on by the blaster after he has detonated any blast in the heading. 1961-62, c. 81, s. 280 (3), *amended*.
- (13) Before returning to the scene of a blasting operation, every person shall assure himself that sufficient air has been introduced into the working place to drive out or dilute to a safe degree the gases produced in the blasting operation. 1961-62, c. 81, s. 249, *amended*. Ventilation of working places after blasting
- (14) The times for blasting shall be so fixed that persons shall be exposed as little as practicable to dust and smoke. 1961-62, c. 81, s. 281, *amended*. Time for blasting

VENTILATION AND DUST CONTROL — PLANTS

Pure air
required

- 214.—(1) There shall be provided a positive supply of fresh air into, and provision for the removal of vitiated air from, a plant building that is sufficient to keep the air reasonably pure and to render harmless, so far as is reasonably practicable, all gases, vapours, dusts or other impurities that are likely to endanger the safety of any person therein.

Direct-fired
heaters

- (2) Any proposed method of heating air at a plant, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer.

Mechanical
ventilating
systems

- (3) There shall be provided and used, where a process is carried on that produces a gas, vapour, dust or other impurity that is likely to be inhaled to an injurious extent by persons in the plant building, such mechanical means satisfactory to an engineer, as are capable of,

- (a) preventing, as far as is reasonably practicable, such inhalation;
- (b) effectively carrying off and disposing of such gases, vapours or dusts; and
- (c) preventing, as far as is reasonably practicable, the recirculation and re-entry of air containing such impurities.

Personal
protective
equipment

- (4) Where required, suitable personal protective equipment shall be worn by any person exposed to any hazard mentioned in subsection 3.

House-
keeping

- (5) Any place in a plant where dust may accumulate shall be regularly cleaned by vacuum, wet sweeping, wet shovelling or other method that reduces the dissemination of dust into the atmosphere.

Abrasive
blasting

- (6) Abrasive blasting or other like operations inside a plant shall be conducted inside an enclosure so constructed and ventilated as to effectively prevent dust from entering the atmosphere of a plant building,

- (a) if this is impracticable; or
- (b) where the operation is likely to produce silica or other harmful dusts in the atmosphere of the plant,

the person conducting the operation and other persons in the affected area shall wear suitable breathing apparatus.

- (7) Suitable precautions shall be taken to ensure that any tank, vat, chamber, pit, pipe, flue or confined space in a plant that may be entered by any person, ^{Confined spaces and tanks}
- (a) has a suitable man-hole or other means of easy egress from all accessible parts of the confined space; and
 - (b) is safe for entry.
- (8) Any container referred to in this section shall be tested by a qualified person, who shall record the result of each test conducted by him, and these records shall be available to an engineer. ^{Containers}
- (9) Where any container referred to in this section has been tested and found, ^{Idem}
- (a) unsafe for entry; or
 - (b) safe for entry, but may thereafter become unsafe to remain in or enter,
- no person shall enter or be allowed to enter or remain in such container unless,
- (c) the person is using a suitable breathing apparatus and wearing a safety belt or safety harness, the free end of the rope of which is held by a person, equipped with a suitable alarm, who is keeping watch outside the container and who is capable of pulling the person from the confined space; and
 - (d) the person entering the container is using such other equipment necessary to ensure his safety; and
 - (e) there is conveniently available a person adequately trained in artificial respiration. *New.*

PROTECTION IN MINES AND PLANTS

215. Where any gas, liquid, vapour or dust is at a pressure other than atmospheric pressure, no person shall open or be allowed to open its container unless, ^{Dangerous pressures}

- (a) before any fastening of the container and of any container connected therewith is loosened, any flow into or out of such container is effectively stopped; and
- (b) before any fastening of the container is removed, all practicable steps are taken to adjust the pressure of gas, vapour, liquid or dust in the container so that the pressure equals atmospheric pressure,

and if any such fastening has been loosened or removed, it shall be securely replaced before any gas, vapour, liquid or dust is permitted to enter the container.

Plastic
piping

216. Plastic pipe used with a pressure in excess of 50 pounds per square inch shall be approved by the district engineer.

Transfer of
liquids or
solids by
compressed
air

217. The transfer of liquids or solids, including fuels, from one location or container to another location or container by the application of air under pressure shall not be permitted, except where properly-designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 431, *amended*.

PROTECTION IN PLANTS

Open tanks,
vats, etc.

- 218.—(1) Every tank, vat or other container for holding a liquid, the top edge of which is less than three feet six inches above the highest floor, ground or platform from which a person might fall into it, shall be securely covered or securely fenced to at least three feet six inches above such floor, ground or platform.

Silos,
hoppers
etc.

- (2) Every silo, bin, hopper or other container or structure that is constructed to discharge from the bottom dry bulk material contained or stored in it, shall have the top of the silo, bin, hopper, structure or container,
- (a) provided with a solid cover; or
 - (b) guarded with a metal grating or bars; or
 - (c) traversed by a gangway; or
 - (d) encircled or encompassed at its perimeter by a floor or platform.

- (3) Where, in the opinion of an engineer, the provisions of subsection 1 or 2 are not practicable, other practicable means satisfactory to the engineer shall be taken to prevent any person from falling into the container. Other safety precautions
- (4) Any stair, gangway or platform above, across, inside or outside a container referred to in subsection 1 or 2 shall be, Gangways, etc.
- (a) at least twenty-two inches wide;
 - (b) provided with an upper rail and either an intermediate rail and toe board or equivalent protection on both sides to a height of not less than three feet six inches; and
 - (c) securely fixed.
- (5) Any covering, fencing, stair, gangway or platform mentioned in this section shall be maintained in a safe condition. Duty to maintain
- (6) No person shall enter or be allowed to enter or remain in any silo, bin, hopper, or other container or structure for containing or storing bulk material unless, Precautions on entry
- (a) all further supply of material thereto is stopped and proper precautions are taken to prevent any further supply; and
 - (b) the person is wearing a safety belt or safety harness, and at least one other person, equipped with a suitable alarm, is in constant attendance, outside the container, who is capable of rendering any necessary assistance. *New.*
- 219.—(1) Before any person is allowed to work on a stock pile of ore, limestone, coke or other material, the stock pile shall be inspected by some authorized person whose duty it is to see that it is in a safe working condition. 1961-62, c. 81, s. 436, *amended*. Inspection of stock pile
- (2) No person shall work or be allowed to work on or near any bulk material that is packaged or other material that is so piled and disposed as to be likely to endanger his safety. *New.* Working near bulk materials
- (3) There shall be provided two exits from a tunnel under a stockpile. *New.* Exits from tunnels under stockpiles

Protection
from
overhead
operations

220. No person shall be employed in a location where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, *amended*.

Passage-
ways

- 221.—(1) All passageways and other walking surfaces in a plant shall be maintained in a safe condition and free from obstructions.

Floor
openings

- (2) Every opening in a floor or other surface in a plant building that may be used by a person shall be,
- (a) protected by a guardrail; or
 - (b) covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

Safe floor
loading

- (3) The maximum safe load that a floor or roof of a plant is capable of bearing shall be conspicuously marked or posted to the satisfaction of an engineer when so directed by him.

Ladders

- (4) Except for approved access ladders to equipment, no ladder shall be installed in a plant at an inclination of more than 70 degrees to the horizontal. *New*.

Antidotes
and
washes

- 222.—(1) At every plant where poisonous or dangerous compounds, solutions or gases are used or produced, there shall be kept in a conspicuous place, as near the compounds, solutions or gases as is practicable, a sufficient supply of satisfactory antidotes and washes, and there shall be installed eye wash fountains and, where necessary, safety showers, for treating injuries received from such compounds, solutions or gases.

Idem

- (2) Such antidotes and washes shall be properly labelled and explicit directions for their use affixed to the boxes containing them. 1961-62, c. 81, s. 427, *amended*.

Storage,
production,
etc., of
acids,
poisons

- 223.—(1) Where an acid or poisonous compound or any other material that is likely to endanger the health of an employee is produced, transferred, used or stored in a plant, due provision shall be made to reduce to a minimum the hazard of handling or storing such material.

Personal
protective
equipment

- (2) Where the provisions taken under subsection 1 do not remove the hazard, personal protective equipment shall be worn by the person exposed to the hazard.

- (3) Where such material is present, there shall be posted ^{Notice} in a conspicuous place, when so required by the chief engineer, notices stating the dangers involved and the precautions to be taken.
- (4) Where required, the employer shall provide the ^{Information} chief engineer with accurate information regarding the percentage of any harmful ingredient in such material.
- (5) Any person who, for use in a plant, manufactures, ^{Labels} distributes or purchases any material that contains benzol, carbon tetrachloride, lead or other ingredient that is deemed dangerous to health by the chief engineer, shall indicate the presence of such ingredient by a label lettered in legible type, distinctly visible and affixed to each package or container thereof.
- (6) The chief engineer, on the advice of the director of ^{Medical examination} the Environmental Health Branch of the Department of Health, may require at specified intervals by qualified physicians and at the expense of the employer a physical examination of any person employed in a plant having a process that the chief engineer considers is likely to endanger such person's safety, and the physician shall forthwith send or cause to be sent to such director a report of the examination in a form suitable to the chief engineer.
- (7) The examination required under subsection 6 shall be ^{Idem} prescribed by such director and may include an x-ray examination and blood or other tests. *New.*

HANDLING MOLTEN MATERIALS

- 224.—(1) Persons employed in a plant in the handling of ^{Shields for protection against burning} molten materials shall be supplied with suitable shields and appliances to protect them as far as possible against being burned.
- (2) It is the duty of all such persons to use the shields ^{Idem} and appliances. *New.*
- 225.—(1) There shall be maintained in readily accessible ^{Rescue apparatus} places at all plants, where the atmosphere may contain dangerous concentrations of poisonous gases or vapours, detection equipment, breathing apparatus and portable resuscitating apparatus of approved type, with an adequate supply of material for the proper operation of the apparatus.

Trained
personnel

- (2) There shall also be on duty in each working shift one or more persons appointed by the manager and trained in the use of breathing and resuscitating apparatus. 1961-62, c. 81, s. 451, *amended*.

Scale cars

226. Each scale car shall be provided with an audible warning alarm that shall be sounded by the operator each time a car is started, or each car shall be equipped with an automatic mechanical warning alarm that will sound when the car is moved. 1961-62, c. 81, s. 437.

Pouring of
hot
materials

- 227.—(1) Every effort shall be made to prevent molten material from coming into accidental contact with cold, damp or rusty surfaces where such contact may cause an explosion. 1961-62, c. 81, s. 438 (2).

Examina-
tion of
moulds,
etc.

- (2) Every ladle or slag pot shall be examined before molten material is placed therein. 1961-62, c. 81, s. 438 (1).

Filling of
moulds,
etc.

- (3) When molten material is transported by mechanical means in ladles or slag pots and the safety of persons may be endangered from splashing, every effort shall be made to ensure that the ladles or slag pots are not filled above a point four inches below the top of the ladle or slag pot.

Idem

- (4) If such limit is exceeded, the ladle or slag pot shall not be moved until the supervisor or other responsible person has warned the persons required to handle the ladle or slag pot of this condition and has warned all other persons in the vicinity. 1961-62, c. 81, s. 439, *amended*.

Blast
furnaces

- 228.—(1) Whenever it becomes necessary for a person to go above the casting floor of an operating furnace, excepting the access to the crane cab or runway and not adjacent to the furnace and having direct egress to the outside, such person shall notify the foreman, or other responsible person, who shall see that there is always a second person in attendance whose duty it is to remain outside the gaseous area and act as a watcher and give the alarm to the casthouse or stockhouse and render every possible assistance in case of gassing or other danger. 1961-62, c. 81, s. 444, *amended*.

Safety
belts

- (2) Safety belts shall be provided and maintained in a readily accessible place for immediate use in case it becomes necessary to rescue a person from the top

structure of a furnace or the ancillary equipment in a plant. *New.*

- (3) All bustle pipes shall be provided with safe working platforms equipped with hand-rails at least three feet six inches in height and, wherever practicable, the platform shall not rest directly on the bustle pipe, but shall be supported on angle bars, so that the floor plate will not become sufficiently hot to cause burns to a person falling on it. 1961-62, c. 81, s. 445 (1), *amended*. Protection from bustle pipes
- (4) Access to the platform shall be by a stairway provided with hand-rails. 1961-62, c. 81, s. 445 (2). Idem
- (5) A suitable line of communication by telephone, gong, or other mechanical means, shall be maintained between the furnace top, and all other dangerous places, to the cast-house, skip operator's room or other place where persons are continuously on duty. 1961-62, c. 81, s. 446, *amended*. Line of communication
- (6) A suitable ladderway or stairway shall be provided from the foundation to the top of the furnace. 1961-62, c. 81, s. 447. Stairways and ladderways
- (7) Unless an approved type of elevator is provided as a means of travel to the furnace top, stairways shall be installed at an angle not greater than 50 degrees from the horizontal and shall be provided with landings or turnouts at intervals of not more than twenty-five feet, measured on the slope, so that it will not be possible for a person to fall from the top to the foundation below. 1961-62, c. 81, s. 448, *amended*. Stairways protected
- (8) When ore becomes frozen or jammed in the furnace hopper or bell and a person is required to bar the ore into the furnace, a suitable guard-rail shall be provided to prevent the person from slipping on to the bell. 1961-62, c. 81, s. 450, *amended*. Protection around bell
229. Every supervisor shall personally attend, or appoint a competent person to supervise, any work around a blast furnace in a plant that involves unusual accident hazard, such as, Supervision of hazardous work around furnaces
 - (a) work in gas mains or cleaners, tearing out linings, relining, work in the casthouse, work about the stoves, when blowing in or blowing out, and any work about the bells or stock line;

- (b) when the furnace is known to be hanging and liable to slip, he shall see that no person is allowed on top for any purpose; or
- (c) when work beyond that of normal inspection and minor maintenance is to be conducted at the furnace top structure,
 - (i) the blast furnace shall be shut down and the area cleared of operating personnel,
 - (ii) the proper work order shall be obtained from the supervisor,
 - (iii) before the repair work is begun, the area shall be tested for toxic gas and such tests shall be continued as necessary for the protection of the personnel,
 - (iv) breathing apparatus, safety ropes and any additional rescue equipment as necessary shall be available. 1961-62, c. 81, s. 449, *amended*.

HAULAGE — ON SURFACE AND UNDERGROUND

Interpre-
tation

230.—(1) In this Part,

- (a) “motor vehicle” means a truck, automobile or any other vehicle propelled or driven otherwise than by muscular power, and includes trackless haulage equipment;
- (b) “vehicle” includes a motor vehicle and every vehicle drawn or propelled by muscular power.

Warning
equipment

- (2) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a suitable audible signal that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (1), *amended*.

Warning
equipment
to be used

- (3) The audible signal on a locomotive or motor vehicle when used in an enclosed building at a mine or plant or underground at a mine shall be sounded where practicable when the vehicle starts to move and at such other times as warning of danger is required. 1961-62, c. 81, s. 299 (1), *amended*.

Warning
device for
backing up

- (4) Every motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped,

where practicable, with a suitable warning device which will operate automatically when the motor vehicle starts to move in reverse. *New.*

- (5) Except when used in adequately lighted buildings or areas, every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a headlight or headlights that shall be maintained in proper working condition, and motor vehicles used for trackless haulage shall be equipped with a suitable tail-light or tail-lights that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (2). Headlight and tail-light
- (6) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with suitable brakes. *New.* Brakes
- (7) No locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be operated unless the brakes, steering, audible signals, lights and rear-vision mirrors, where applicable, are in satisfactory condition. *New.* Operating equipment to be in satisfactory condition
- 231.—(1) The control levers of storage battery and trolley locomotives used on surface at a mine or plant or underground in a mine shall be so arranged that the lever cannot accidentally be removed when the power is on. 1961-62, c. 81, s. 298. Control levers
- (2) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be moved under its own power unless where it is manually operated, the operator is in proper position at the controls or, where it is operated by a remote control or automated system, the system is approved by the chief engineer. *New.* Control systems
- (3) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be left unattended unless the controls have been placed in the safe position for parking and the brakes have been set. 1961-62, c. 81, s. 302. Unattended locomotives
- (4) The operating platform of a locomotive used on surface at a mine or plant or underground in a mine shall be provided with a suitable seat and an adequate guard for the protection of the motorman. 1961-62, c. 81, s. 299 (3), *amended.* Guard to protect motorman
- 232.—(1) Motor vehicle haulage equipment used on surface at a mine or plant or underground in a mine shall Wheel chocks

carry, where practicable, wheel chocks to be used to block movement on slopes when the equipment is left unattended or is undergoing maintenance.

Safety
support for
truck boxes

- (2) Every motor driven dump truck used on surface at a mine or plant or underground in a mine shall be equipped with a suitable safety support device, which shall be used when repairs or maintenance are conducted under a raised box. *New.*

Prohibitions
around
moving
machines

- 233.—(1) No operator shall leave the controls of his vehicle or machine unattended on surface at a mine or plant or underground in a mine while,

- (a) the bucket of a front end loader, backhoe or other excavating machine;
- (b) the blade of a bulldozer; or
- (c) the load of a fork-lift truck, crane or other hoisting machine,

is in a raised position, except when it is suitably and safely supported.

Idem

- (2) No person on surface at a mine or plant or underground in a mine shall be under any part of a motor vehicle or other equipment in which the lowering of that part may endanger the person unless that part is safely blocked in such a way as to prevent its lowering.

Idem

- (3) No person on surface at a mine or plant or underground in a mine shall operate a crane or other hoisting machine in such a way that any part of its load may pass over a person other than the person receiving the load.

Idem

- (4) A person on surface at a mine or plant or underground in a mine receiving a load shall so far as is practicable position himself so that the load does not pass over him.

Idem

- (5) No person on surface at a mine or plant or underground in a mine shall operate a shovel, backhoe or similar excavating machine in such a way that it or any part of its load may pass over a person.

Idem

- (6) No person on surface at a mine or plant or underground in a mine shall remain on or in a motor vehicle where he might be endangered during the loading or unloading of the vehicle.

- (7) Where a motor vehicle on surface at a mine or plant ^{Idem} or underground in a mine is being backed up in a location where a person may be endangered by the vehicle backing up or where the driver may be endangered, another person shall be stationed to direct the driver in backing up the vehicle. *New.*
- 234.—(1) Every switch in a track on which cars are moved ^{Track condition} by motorized power on surface at a mine or plant or underground in a mine shall have the frog and guard rail entrances provided with a guard block if its construction is not such that the hazard of a person's foot being caught in it is reduced to a minimum.
- (2) All tracks in use on surface at a mine or plant or ^{Maintenance of tracks} underground in a mine shall be maintained in good working condition. 1961-62, c. 81, s. 409.
- HAULAGE — UNDERGROUND
- 235.—(1) In motorized haulage underground in a mine, ^{Tail-light on trains} a suitable tail-light shall be used in conjunction with made-up trains. 1961-62, c. 81, s. 299 (2), *amended.*
- (2) Every self-propelled unit of trackless haulage equipment used underground in a mine shall be equipped ^{Lights to show width of vehicle} with suitable lights or reflectors that show in the direction of travel the width of the vehicle. 1961-62, c. 81, s. 297 (3).
- 236.—(1) In motorized haulage in any level, drift or ^{Riding on vehicles prohibited} tunnel in or about a mine, no unauthorized person shall ride on any vehicle. 1961-62, c. 81, s. 300 (1), *amended.*
- (2) Special trips for persons only shall be made on ^{Idem} approved vehicles. 1961-62, c. 81, s. 300 (2).
- 237.—(1) On every level of a mine on which motorized ^{Clearance and safety stations} track haulage is employed, a clearance of at least eighteen inches shall be maintained between the sides of the haulageway and the cars or locomotive, or there shall be a clearance of twenty-four inches on one side, or safety stations shall be cut every 100 feet. 1961-62, c. 81, s. 301 (1), *amended.*
- (2) Such safety stations shall be plainly marked. 1961-^{Idem, marking} 62, c. 87, s. 301 (2).
- (3) On every level of a mine on which motorized track-^{Clearance for trackless haulage} less haulage equipment is employed, a minimum total clearance of five feet shall be maintained between the sides of the haulageway or workings and the motorized equipment.

Idem, plus
pedestrian
travel

- (4) On every level of a mine regularly used both for pedestrian traffic and motorized trackless haulage where there is a total minimum clearance of less than seven feet, safety stations shall be cut at intervals not exceeding 100 feet and they shall be plainly marked. 1961-62, c. 81, s. 301 (3, 4), *amended*.

Travelways
clear of
obstructions

- (5) All regular travelways in or about a mine shall be maintained clear of debris or obstructions that are likely to interfere with safe travel. 1961-62, c. 87, s. 301 (5).

HAULAGE — ON SURFACE

Guard-rails
at track
approaches

- 238.—(1) Guard-rails shall be placed at the approach to tracks on surface at a mine or plant where motorized haulage is used and where the view of the tracks is obstructed in one or both directions.

When im-
practical

- (2) Where restricted clearances make the use of guard-rails impractical in the opinion of the district mining engineer, he may permit such guard-rails to be omitted but shall require that there be installed at the track approaches a suitable type of warning signal that will automatically give adequate, audible and visible warning at all times of the approach of the conveyance, or that a switchman shall walk ahead of the leading conveyance on the track when the conveyance is in dangerous proximity to the area requiring guarding and stand guard at such approaches. 1961-62, c. 81, s. 434, *amended*.

Side clear-
ance,
haulage

- 239.—(1) Where motorized haulage is used on surface at a mine or plant and the clearance between the sides of conveyances on parallel tracks or between the sides of conveyances and the side of a building or other structure is less than eighteen inches, the location shall be plainly marked showing the danger. 1961-62, c. 81, s. 440, *amended*.

Overhead
clearance

- (2) At the approach to an overhead bridge, pipe line or a similar structure on a standard-gauge railway track at a mine or plant where the clearance is less than six feet between the top of a railway car and the underside of the structure, a "low bridge" warning device shall be installed. 1961-62, c. 81, s. 441, *amended*.

Overhead
hazards

- (3) Where the operator may be exposed to overhead hazards at a mine or plant, a cab, screen or other adequate overhead protection shall be provided on,

- (a) a power-driven crane, shovel or similar machine;
- (b) a fork-lift truck; and
- (c) a front-end loader or other excavating machine. *New.*

240. Motor vehicles operating on surface at a mine shall be equipped, where practicable, with rear-vision mirrors. *New.* Rear-vision
mirrors

PROTECTION FROM MACHINERY — MINES AND PLANTS

241. In this Part,

Interpre-
tation

- (a) "lifting device" means a device that is used to raise or lower any material or object and includes its rails and other supports but does not include a device to which the provisions of this Part governing elevators or construction hoists apply;
- (b) "prime mover" means an initial source of motive power;
- (c) "transmission machinery" means any object by which the motion of a prime mover is transmitted to a machine that is capable of utilizing such motion, and includes a shaft, pulley, belt, chain, gear, clutch or other device. *New.*

242.—(1) Clearances adequate for the safety of persons shall be maintained in a mine or plant between the moving part of any machine or any material carried by the moving part and any other machine or structure. Clearances

(2) Adequate lighting shall be provided for all persons who are required to work near or about machinery in a mine or plant. Lighting

(3) Every prime mover, machine, transmission machinery or device that is dangerous to the safety of any person in a mine or plant shall be safely fenced or guarded, Fences,
guards

- (a) unless its position, construction or attachment assures the same protection as if it were safely fenced or guarded; or

- (b) unless it is provided with a safety device that automatically prevents a person operating it from coming into contact with any dangerous part.
- Idem (4) Every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion connected to or forming part of or appurtenant to any machine, transmission machinery or device in a mine or plant shall be so recessed, encased, located or otherwise effectively guarded as to prevent injury to any person.
- Repairs (5) No person shall, or shall be permitted to clean, oil, adjust, repair or perform maintenance work on any machine, transmission machinery or device in a mine or plant while it or any part of it that is likely to endanger the safety of any person is in motion, except when such work is not practicable while the machine, transmission machinery or device is stopped.
- Starting (6) No person shall work or be allowed to work where the starting of a machine, transmission machinery or device in a mine or plant is likely to endanger the safety of any person, due to electrical hazard or exposure to moving parts,
- (a) unless prior to doing repair or maintenance on electrically driven machinery, the person has made arrangements to ensure that the disconnect switch or switches supplying power to the machinery are opened and tagged or locked in accordance with section 435; or
- (b) unless, for other than electrically driven machinery, precautions have been taken to prevent such starting. *New.*
- Grinding wheels to be guarded 243.—(1) Every stationary power-driven grinding wheel in a mine or plant shall be provided with a suitable hooded guard. 1961-62, c. 81, s. 404 (1), *amended*.
- Idem (2) Such guard shall be adjusted close to the wheel and extended forward, over the top of the wheel, to a point at least 30 degrees beyond a vertical line drawn through the centre of the wheel. 1961-62, c. 81, s. 404 (2).
- Runways to have hand-railing 244. Every runway or staging in a mine or plant that is more than five feet from the floor and used for oiling or any similar purpose shall be provided with a hand-railing. 1961-62, c. 81, s. 406, *amended*.

245. Every counterweight in a mine or plant shall be ^{Counter-weights} situated or guarded so as to reduce to a minimum the hazard of injury to a person along its travel or should it become detached from its fastenings.
246. Persons engaged in dangerous proximity to moving ^{Wearing loose clothing} machinery in a mine or plant shall not wear or be allowed to wear loose outer clothing. 1961-62, c. 81, s. 405, *amended*.
- 247.—(1) The rated working load of every lifting device ^{Lifting devices} in a mine or plant shall be plainly marked on the device.
- (2) No lifting device in a mine or plant shall be loaded ^{Idem} beyond its rated working load, except for the purpose of a test.
- (3) No cable, chain, rope, sling, ring, hook, shackle, ^{Idem} swivel or other part of a lifting device in a mine or plant shall be used unless it is of good construction, sound material and adequate strength to safely support the maximum load to which it is likely to be subjected, and is properly maintained.
- (4) Every lifting device in a mine or plant shall be ^{Idem} thoroughly examined at least annually by an authorized person.
- (5) All rails in a mine or plant on which a lifting device ^{Idem} moves shall be of proper size and properly laid and maintained and have an even running surface.
- (6) No newly-installed lifting device in a mine or plant ^{Idem} shall be used until it has been thoroughly tested and examined by an authorized person. *New*.

WELDING AND BURNING — MINES AND PLANTS

- 248.—(1) All persons exposed to the hazard of radiation ^{Radiation protection} from welding or burning operations in a mine or plant shall use protective helmets, goggles, or other devices.
- (2) When welding or burning operations in a mine or plant emit harmful fumes, adequate ventilation shall be provided, or respirators shall be worn by persons ^{Ventilation or respiratory protection requirements} exposed to the fumes.
- (3) Persons shall do no welding or burning in a mine or plant where other persons may be exposed to radiation ^{Protection against electric welding arc} from the operation, unless such other persons

wear suitable eye protection or are protected by screens.

Hand and
arm pro-
tection

- (4) Gauntlet gloves and arm protection shall be worn by persons when electric welding in a mine or plant.

Fire
fighting
equipment

- (5) Suitable fire extinguishers shall be kept at hand during welding operations in a mine or plant, or other fire fighting equipment shall be readily available.

Location of
welding
equipment

- (6) Cylinders, piping and fittings of compressed and liquefied gas systems pertaining to welding and burning in a mine or plant shall be so located as to avoid physical damage to the cylinders, piping and fittings.

Flames

- (7) Persons shall guard against sparks or flames from coming in contact with cylinders, regulators or hoses of compressed-gas systems pertaining to welding and burning in a mine or plant and all charged cylinders shall be protected from excessive heat.

Leaks

- (8) Before using any gas-welding or burning equipment, persons shall ensure that all parts of the equipment are free from defects, leaks, oil or grease.

Cylinder
valves

- (9) Cylinder valves shall be closed when work is finished or cylinders are empty, and valve-protection covers shall be kept in position when the cylinder is not connected for use.

Containers

- (10) No welding, brazing, soldering or burning operation shall be conducted on any container that has been used to contain any explosive or flammable substance, unless all practicable steps have been taken to,

(a) remove the substance and any fume, gas, vapour or dust arising from it; or

(b) render the substance and any fume, gas, vapour or dust arising from it non-explosive or non-flammable,

and if such container has been subjected to any such alteration or repair, it shall be ensured that no explosive or flammable substance enters the container until the container has cooled sufficiently to prevent any risk of igniting the substance. *New.*

TRAVELLING CRANES — MINES AND PLANTS

- 249.—(1) In this section and in section 499, "crane" ^{Interpre-}
means a crane that travels on fixed tracks and is ^{tation}
operated from a cab mounted on the crane and which
may be radio controlled. 1961-62, c. 81, s. 401 (1),
amended.
- (2) No person under the age of eighteen years and no ^{Qualifica-}
person who has not had adequate experience on a ^{tions of}
crane shall be authorized to operate a crane in a ^{crane}
mine or plant. 1961-62, c. 81, s. 401 (7), *amended.* ^{operators}
- (3) Every crane in a mine or plant shall be equipped with ^{Warning}
a whistle, bell, gong or horn that shall be sounded at ^{devices}
such times as are necessary to give warning of the
approach of the crane to places where persons are
working or are liable to pass. 1961-62, c. 81, s. 401
(2), *amended.*
- (4) Where any person is on or near the wheel track of a ^{Where}
crane in any place in a mine or plant where the safety ^{crane}
of such person is likely to be endangered by the ^{endangers}
crane, the operator of the crane shall be warned of ^{person}
the presence of such person and the crane or any part
thereof shall not be allowed to approach within ten
feet of the place. *New.*
- (5) Every crane in a mine or plant shall be equipped with ^{Devices to}
suitable devices to prevent overwinding. ^{prevent}
^{overwind}
- (6) The manager of a mine or plant shall depute one or ^{Daily}
more qualified persons to examine daily such parts ^{examination}
of any crane or apparatus pertaining thereto upon ^{of cranes}
the proper working of which the safety of persons
depends.
- (7) A record of the examination and other regular main- ^{Record}
tenance examinations of any crane in a mine or plant ^{available}
shall be kept, signed by the person making the
examination, and such record shall be available to
the district electrical-mechanical engineer at all
times.
- (8) No person, other than the operator, shall be per- ^{Riding}
mitted to ride on a crane or any part thereof in a ^{prohibited}
mine or plant or on any material carried by the
crane, except for inspection, supervision, mainten-
ance or repair, or the instruction of a new operator.
1961-62, c. 81, s. 401 (3-6), *amended.*

CONVEYOR BELTS — MINES AND PLANTS

Conveyors,
belts

250.—(1) No person shall ride on a conveyor or belt in a mine or plant, other than an escalator or man-lift approved by the chief engineer.

Idem

(2) The following apply to installations of conveyor belts in mines and plants:

1. Where conveyorways are used as regular travelways, suitable means shall be provided to protect persons from material that may fall from the belt.
2. All conveyorways shall be provided with a walkway or some approved method of access for maintenance purposes.
3. Any accessible section of an electrically driven belt conveyor shall be provided with pull-cords to stop the conveyor in an emergency and such pull-cords shall reach from the head pulley to the tail pulley and all controls operated by these cords shall be of the manual-reset type.
4. Where required, an approved warning device shall be provided which will warn persons that the belt is about to start.
5. All head, tail, drive and tension pulleys shall be guarded at the pinch points and the length of such guards shall be extended to at least three feet from the pinch point. 1961-62, c. 81, s. 410, *amended*.

PROTECTION IN WORKING PLACES OF MINES

Overhead
operations

251. No person shall work in a location in a mine where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, *amended*.

Fencing
of shafts
and other
openings

252. The top of every working shaft in a mine shall be securely fenced or protected by a gate or guard-rail, and every pit or opening in a mine dangerous by reason of its depth shall be securely fenced or otherwise protected. 1961-62, c. 81, s. 260, *amended*.

- 253.—(1) At all shaft and winze openings on the surface ^{Gate at shaft entrances} and on every level in a mine, unless securely closed off, the hoisting compartments shall be protected by a substantial gate, which shall be kept closed except when the hoisting conveyance is being loaded or unloaded at such level.
- (2) The clearance beneath any such gate shall be kept to ^{Idem} a minimum.
- (3) Where haulage tracks lead up to a hoisting compartment on surface or underground, the gate on such compartment shall be reinforced in such a manner that it is sufficiently strong to withstand any impact imparted thereto by collision therewith of any locomotive train or car operated on such tracks. ^{Hoisting compartment gates}
- (4) Hoisting compartment gates shall be sufficiently ^{Idem} reinforced where there is a hazard of impact due to the approach of a motor vehicle. 1961-62, c. 81, s. 261, *amended*.
- 254.—(1) Every shaft and winze in a mine shall be ^{Shaft and winze timbering} securely cased, lined or timbered, and during sinking operations the casing, lining or timbering shall be maintained within a safe distance of the bottom. 1961-62, c. 81, s. 262 (1), *amended*.
- (2) In no instance shall such distance exceed fifty feet. ^{Idem} 1961-62, c. 81, s. 262 (2).
- (3) The guides, guide attachments and shaft casing, ^{Strength of guides, etc.} lining or timbering shall be of sufficient strength and shall be suitably designed, installed and maintained so that the safety catches referred to in section 324 may grip the guides properly at any point in the shaft. 1961-62, c. 81, s. 262 (3), *amended*.
255. There shall be provided a safe passageway and standing room for a person outside the shaft at all ^{Protection at shaft stations} workings opening into a shaft of a mine, and the manway shall in all cases be directly connected with such openings. 1961-62, c. 81, s. 263, *amended*.
- 256.—(1) Except during sinking operations, if material ^{Lining compartments at levels} is handled in a shaft or winze compartment of a mine, there shall be maintained around that compartment, except on the side on which material is to be loaded or unloaded, a substantial partition at the collar and at all levels. 1961-62, c. 81, s. 266 (1), *amended*.

- Idem (2) Such partition shall extend above the collar and all levels a distance not less than the height of the hoisting conveyance plus six feet and it shall extend below the collar and all levels at least six feet and it shall conform to the size of the conveyance allowing for necessary clearances. 1961-62, c. 81, s. 266 (2).
- Partition between manway and hoisting compartments 257. The footway or ladderway in a shaft or winze of a mine shall be separated from the compartment or division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290, *amended*.
- Counter-weight compartment 258. Wherever a counterweight is used in a shaft or winze of a mine, it shall be safely enclosed, unless it travels on guides. 1961-62, c. 81, s. 267, *amended*.
- Protection in sinking operations 259. During shaft-sinking operations in a mine, no work shall be done in any place in a shaft or winze while persons are working in another part of the shaft or winze below such place, unless the persons working in the lower position are protected from the danger of falling material by a securely-constructed covering extending over a sufficient portion of the shaft to afford complete protection. 1961-62, c. 81, s. 264, *amended*.
- Open hooks not to be used 260.—(1) Open hooks shall not be used in conjunction with the suspension of any shaft staging of a mine. 1961-62, c. 81, s. 264, *amended*.
- Idem (2) Open hooks shall not be used in connection with the suspension of any equipment or material in a shaft, winze, raise, or over a person in any location underground in a mine. *New*.
- Protection on shaft inspection 261.—(1) No person shall do any work or conduct any examination in a compartment of a shaft or winze of a mine or in that part of the headframe used in conjunction therewith while hoisting operations, other than those necessary for doing such work or conducting such examination, are in progress in such compartment.
- Idem (2) No person shall do any work or conduct any examination in a shaft or winze of a mine or in that part of a headframe used in conjunction therewith unless he is

adequately protected from accidental contact with any moving hoisting conveyance or counterweight or the danger of falling objects accidentally dislodged. 1961-62, c. 81, s. 268, *amended*.

262. Where in a mine the enclosing rocks are not safe, every adit, tunnel, stope or other working in which work is being carried on or through which persons pass shall be securely cased, lined or timbered, or otherwise made secure. 1961-62, c. 81, s. 269, *amended*. ^{Timbering mine workings}
- 263.—(1) Except where approved raising equipment is used, all raises in a mine that are to be inclined at over 50 degrees and that are to be driven more than sixty feet slope distance shall be divided into at least two compartments, one of which shall be maintained as a ladderway and shall be equipped with suitable ladders. 1961-62, c. 81, s. 271 (1), *amended*. ^{Steeply-inclined raises}
- (2) The timbering shall be maintained within a safe distance of the face and in no event shall the distance between the face and the top of the timbering exceed twenty-five feet. 1961-62, c. 81, s. 271 (2). ^{Idem}
- 264.—(1) Whenever chutes in a mine are pulled where persons are working or may enter at the time of pulling, the pulling area shall be marked by signs or the persons working in the vicinity shall be notified and, as pulling proceeds, proper precautions shall be taken to ascertain that the broken material is settling freely. 1961-62, c. 81, s. 272 (1), *amended*. ^{Precautions as to broken material}
- (2) When there is any indication of a hang-up, the location shall be adequately protected by suitable signs or barricades. 1961-62, c. 81, s. 272 (2). ^{Idem}
265. Unless the entrance to a stope in a mine is capable of being used as such at all times, a second means of entrance shall be provided and maintained. 1961-62, c. 81, s. 273, *amended*. ^{Access to stopes}
266. The top of every mill hole, manway or other opening in a mine shall be kept covered or otherwise adequately protected. 1961-62, c. 81, s. 274, *amended*. ^{Guarding mill holes, manways, etc.}
267. Wherever persons are working in a mine below a level in a place whose top is open to the level in close proximity to a haulageway or travelway, some person shall effectively guard the opening unless it is ^{Guarding open workings}

securely covered over or otherwise closed off from the haulageway or travelway. 1961-62, c. 81, s. 275, *amended*.

Guarding
tops of
raises

268. The tops of all raises or other openings to a level in a mine shall be kept securely covered, fenced off or protected by suitable barricades to prevent inadvertent access thereto. 1961-62, c. 81, s. 276, *amended*.

Scaling bars
and gads

269. There shall be provided and maintained in every mine an adequate supply of properly-dressed scaling bars and gads and other equipment necessary for scaling. 1961-62, c. 81, s. 278, *amended*.

Warning of
abnormal
conditions

- 270.—(1) Where there is non-continuous shift operation in areas of a mine, the on-coming shift shall be warned of any abnormal condition affecting the safety of operations.

Idem

- (2) Such warning shall consist of a written record over the signature of a responsible person on the off-going shift and shall be read and countersigned by the corresponding responsible person on the on-coming shift before persons are permitted to resume operations in the areas indicated in such record. 1961-62, c. 81, s. 282, *amended*.

Check-in,
check-out
systems

271. At every mine where persons are employed underground, a suitable system shall be established and maintained to check in all persons who have gone underground and to check out all persons who have returned to surface, and it is the duty of such persons to check in and to check out in accordance with such system. 1961-62, c. 81, s. 283, *amended*.

Signs de-
signating
repair work

272. Where repair work is in progress in a manway in a mine or conditions arise that may endanger travel through the manway, it shall be closed off or adequate signs designating its unfitness for travel purposes shall be posted at all entrances to it. 1961-62, c. 81, s. 284, *amended*.

Diamond-
drill holes

- 273.—(1) Diamond-drill holes shall be plotted on all working plans of levels of a mine.

Guarded
while
blasting
near

- (2) When an active mine heading is advancing toward a diamond-drill hole in a mine, the collar or the nearest points of intersection of the hole or both shall be

securely closed off or guarded at all times that blasting is being done within fifteen feet of any possible intersection of the hole.

- (3) The collar and any points of intersection of every diamond-drill hole in a mine shall be plainly marked at the time that drilling is discontinued or an intersection made. ^{Marked}
- (4) Such markings shall consist of a single capital letter "H" in yellow paint measuring twelve inches by twelve inches, which shall be placed within four feet of the collar or intersection. 1961-62, c. 81, s. 285, *amended*. ^{Idem, with letter "H"}
274. Where tailings are used for filling worked-out areas underground in a mine, the moisture contained in the tailings and the liquid draining off therefrom shall not have a higher cyanide content than .005 per cent expressed as cyanide of potassium. 1961-62, c. 81, s. 286, *amended*. ^{Tailing used for fill}

HANDLING WATER — MINES

275. Every working mine shall be provided with suitable and efficient machinery and appliances for keeping the mine free from water, the accumulation or flowing of which might endanger the lives of persons in the mine or in any adjoining mine. 1961-62, c. 81, s. 199, *amended*. ^{Removal of water from mine workings}
276. Where there is or may be an accumulation of water in a mine, any working approaching the same shall have bore holes kept in advance and such additional precautionary measures shall be taken as are deemed necessary to obviate the danger of a sudden breakthrough of the water. 1961-62, c. 81, s. 200, *amended*. ^{Precautions against flow of water}
277. A suitable stopping shall be placed in every working shaft in a mine to prevent that part of the hoisting conveyance carrying persons from being inadvertently lowered into water in the sump of the shaft. 1961-62, c. 81, s. 201, *amended*. ^{Protection at sump}
- 278.—(1) In this section, ^{Interpretation}
- (a) "bulkhead" means any structure built for the purpose of impounding water or confining air under pressure in a drift, crosscut or any other

mine opening and constructed in such a manner as to completely close off such drift, crosscut or other mine opening;

(b) "dam" means a structure built for the purpose of impounding water in a drift, crosscut or other mine opening and built in such a manner as to permit an unobstructed overflow of the water.

Location of
bulkheads
and dams

(2) The location of every underground bulkhead and dam within the meaning of this section shall be clearly shown on the mine plans. 1961-62, c. 81, s. 202 (1, 2).

Permission
for dams

(3) No dam behind which more than twenty-five tons of water may be impounded shall be constructed underground in a mine until application in writing is made to the district mining engineer and written permission is granted by the chief engineer and then only when constructed in accordance with plans and specifications that have been approved by the chief engineer.

Permission
necessary
for
bulkhead

(4) No bulkhead shall be constructed underground in a mine without the written permission of the chief engineer and then only when constructed in accordance with plans and specifications that have been approved by him.

Completion
of bulkhead

(5) On the completion of the installation of a bulkhead in a mine, the manager shall immediately notify the chief engineer that it has been completed. 1961-62, c. 81, s. 202 (3-5), *amended*.

CARE AND USE OF EXPLOSIVES AND BLASTING AGENTS

Precautions
to be taken

279. Every possible precaution shall be taken in the handling and transportation of explosives and blasting agents at a mine or plant. 1961-62, c. 81, s. 241, *amended*.

Marking of
explosives

280.—(1) No explosive shall be used at a mine or plant unless there are plainly printed or marked on every original package containing the explosive the name and place of business of the manufacturer, the strength of the explosive and the date of its manufacture. 1961-62, c. 81, s. 280.

- (2) Only explosives in Fume Class I as established by the Explosives Division of the Department of Energy, Mines and Resources of Canada or explosives and blasting agents as permitted by the chief engineer shall be used underground in a mine. Fume classification of explosives
- (3) The preparation of a blasting agent at a mine or plant, except when prepared by a properly-authorized manufacturer of explosives or blasting agents, shall be done only with the permission in writing of the chief engineer. 1961-62, c. 81, s. 213, *amended*. Preparation of blasting agents
- (4) Every case of supposedly defective fuse, detonator or blasting cap or explosive shall be reported to the district mining engineer with the name and address of the manufacturer and accompanied, if available, by the packing slip from the original container of the fuses, detonators or blasting caps, or explosives, along with all other pertinent information available. 1961-62, c. 81, s. 214, *amended*. Defective explosives, etc., to be reported
- 281.—(1) Except as otherwise provided, all explosives, blasting agents, detonators and blasting caps shall be stored on surface at a mine or plant in special suitable buildings, such as magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses. Storage of explosives and blasting agents
- (2) Detonators, blasting caps or igniter cord shall not be stored in the same receptacle or storage building as other explosives or blasting agents. Storage of detonators etc.
- (3) No such storage building shall be erected or maintained at a mine or plant without the written permission of the district mining engineer, nor until the site of the building and the style of structure have been approved by him. Permission necessary before construction
- (4) Such written permission shall state the maximum quantity and kind of detonators, explosives or blasting agents that may be stored in the building. Permission to state quantity
- (5) The permission shall be posted up in the building. Permission to be posted
- (6) Every such storage building shall be under the direction of the manager or a person authorized by him. 1961-62, c. 81, s. 215 (1-6), *amended*. Storage under authorized person
- (7) Explosives or blasting agents shall not be stored within 300 feet of a mine or plant main substation. Storage near power prohibited

Storage
near over-
head supply
lines

- (8) The minimum distance measured at ground level between an overhead supply line and explosives or blasting agents storages shall not be less than $1\frac{1}{2}$ times the length of one span between the supports of such line. *New.*

Location of
storage
buildings

- (9) Where possible, every such storage building shall be located in accordance with the British Table of Distances in respect of its distance from the mine or plant or any other building or any public road or railway.

Idem

- (10) Where conditions are such that it is impossible to locate any storage building in accordance with the British Table of Distances, the mine or plant manager and the district mining engineer shall jointly choose the most suitable location.

Storages
for blasting
agents

- (11) Storages for blasting agents may contain three times the quantity of blasting agents as compared to explosives set by the British Table of Distances.

Where
explosives
and blasting
agents
stored
together

- (12) Where explosives and blasting agents are stored together, the lesser limit of storage applies.

Materials
used in
storage
buildings

- (13) Every such storage building shall be constructed of such materials as to ensure as far as possible against accident from any cause.

Require-
ments to be
posted

- (14) The requirements in reference to the care and use of explosives and blasting agents shall be kept posted up inside every such storage building.

Buildings
locked,
and signs

- (15) Every such storage building shall be kept securely locked at all times that the attendant is not present and it shall be clearly indicated by one or more easily visible signs that explosives or blasting agents are stored therein.

Posting
of signs

- (16) Such sign or signs shall be posted beside the road approaches to the building at least eight feet above the ground and twenty-five feet distant from the entrance. 1961-62, c. 81, s. 215 (13), *amended.*

Storages
to be
clean, etc.

- 282.—(1) All explosive, blasting agent, detonator or fuse storages at or in a mine or plant shall be kept clean, dry and free from grit at all times. 1961-62, c. 81, s. 216 (1), *amended.*

- (2) Floors and shelves of magazines and thaw houses shall be treated with a suitable neutralizing agent, whenever necessary, to remove any traces of explosive substances. 1961-62, c. 81, s. 217. Floors and shelves
- 283.—(1) When supplies of explosives or blasting agents are removed from a magazine, those that have been longest in the magazine, if they are not defective, shall be used first. What explosives and blasting agents to be used first
- (2) Where explosives or blasting agents become defective, they shall be suitably and safely disposed of. Defective explosives and blasting agents
- (3) An engineer may, if he deems it necessary to protect life or property, arrange for the disposal of defective or abandoned explosives or blasting agents, and the amount of costs so incurred shall be a debt due to the Crown from the owner or agent, recoverable in any court of competent jurisdiction. 1961-62, c. 81, s. 218, *amended*. Disposal of defective explosives and blasting agents
284. Only implements of wood or fibre shall be used in opening cases that contain explosives. 1961-62, c. 81, s. 219. Opening cases
- 285.—(1) Explosives or blasting agents, including caps, fuses and igniter cord, shall not be stored underground in a mine in excess of the necessary underground supply for forty-eight hours. 1961-62, c. 81, s. 220 (1). Storage of explosives and blasting agents underground
- (2) In no case shall an amount exceeding 300 pounds of explosives or 900 pounds of blasting agents be stored in any one place underground in a mine without the written permission of the district mining engineer. 1961-62, c. 81, s. 220. Storage capacity
- (3) With the written permission of the district mining engineer and subject to such conditions as he prescribes, other underground explosive storages in a mine may be established, but in no case shall more than 1,000 pounds of explosives or 3,000 pounds of blasting agents be stored in any one storage place. Written permission for increased capacity
- (4) Where explosives and blasting agents are stored together underground in a mine, the lesser limit of storage applies. Idem
- (5) Explosives and blasting agents stored underground in a mine shall be kept in suitable containers or storage places in suitable locations. Suitable storage

Protection
from trains,
etc.

- (6) Explosives or blasting agents shall not be stored underground in a mine in places where there is a possibility of a train or car colliding with the containers of the explosives or blasting agents.

Where
excess
quantities
required

- (7) Where explosives or blasting agents in excess of the quantity that may be stored in approved underground storages in a mine are required for such operations as longhole blasts, etc., only such quantities as can be loaded in a twenty-four hour period shall be kept in a storage place underground at any time for such blast.

Surplus
at shift end

- (8) Any explosives or blasting agents not loaded at the end of a shift shall be stored in accordance with the requirements of this section or be adequately guarded. 1961-62, c. 81, s. 220, *amended*.

Location
of under-
ground
storages for
explosives,
etc.

- 286.—(1) Explosives or blasting agents shall not be stored underground in a mine within,
- (a) 200 feet of a shaft station; or
 - (b) the distance prescribed by subsection 4 of section 560.

Idem,
detonators,
etc.

- (2) Detonators, blasting caps, capped fuses or igniter cord, while stored underground in a mine, shall be kept in separate, suitable, closed containers or storage places.

Idem

- (3) Such containers and storage places shall not be located within twenty-five feet of any other explosives or blasting agents. 1961-62, c. 81, s. 222, *amended*.

Open-flame
lamps on
surface

- 287.—(1) No flame-type light shall be taken within twenty-five feet of any building or place on the surface of a mine or plant in which explosives or blasting agents are stored.

Idem,
under-
ground

- (2) No flame-type light shall be taken within ten feet of any place underground in a mine where explosives or blasting agents are stored unless a suitable, safe arrangement for the placing of such light is provided.

Smoking

- (3) No person shall smoke in any place or building in a mine or plant where explosives or blasting agents are stored or while handling explosives or blasting agents. 1961-62, c. 81, s. 223, *amended*.

- 288.—(1) A properly authorized person or persons shall make a thorough weekly inspection of all explosives or blasting agents, explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, cap and fuse houses, and all storage boxes or places in or about the mine or plant used for the purpose of storing explosives, blasting agents, detonators or blasting caps and shall make a report in writing to the manager stating that such inspection has been made and certifying as to the conditions found. ^{Inspection of storage places}
- (2) The manager shall take immediate steps to correct any unsuitable conditions found and to properly dispose of any deteriorated explosives or blasting agents. ^{Unsuitable conditions to be rectified}
- (3) The manager shall make a prompt investigation when an act of careless placing or handling of explosives or blasting agents is discovered by or reported to him. ^{Careless acts}
- (4) Any employee who commits a careless act with an explosive or blasting agent or where explosives or blasting agents are stored, or who, having discovered such an act to have been committed, omits or neglects to report immediately such act to an officer in charge of the mine or plant, is guilty of an offence against this Act, and the officer in charge of the mine or plant shall immediately report such offence to the district mining engineer or to the Crown attorney of the county or district in which the mine or plant is situate. 1961-62, c. 81, s. 224, *amended*. ^{Report of carelessness to engineer}
- 289.—(1) When a mine or plant is closed down, all explosives, blasting agents, fuses, detonators and blasting caps shall be disposed of and no explosive or blasting agent shall be stored at any such closed-down mine or plant without the written permission of the chief engineer. 1961-62, c. 81, s. 225, *amended*. ^{Disposal of explosives, etc.}
- (2) No person shall take away from a mine or plant any explosive, blasting agent, fuse, detonator or blasting cap without the written permission of the manager or of such person as is authorized by the manager to give such permission. 1961-62, c. 81, s. 226, *amended*. ^{Removal from mine, etc., of explosives, etc.}
- 290.—(1) No building for thawing explosives shall be maintained in connection with a mine or plant without the written permission of the district mining engineer. ^{Thaw houses}

Approval of
building

- (2) The building shall be above ground, and the site of the building and the style of the structure and equipment shall be subject to the approval of an engineer.

Quantity
stored

- (3) The quantity of explosives kept in a thaw house at any time shall not exceed the requirements of the mine or plant for a period of twenty-four hours plus the amount that may be necessary to maintain that supply, but the district mining engineer may give permission in writing to store a quantity not in excess of the permitted capacity of the building if, in his opinion, the heating equipment is such that the temperature can be controlled within approved safe limits.

Thermo-
meter in
thaw house

- (4) A reliable recording thermometer shall be kept in the room in which explosives are thawed and the record thereof kept, but, where the amount of explosives in such thawing room does not exceed 200 pounds at any one time, the district mining engineer may give permission in writing to use a maximum and minimum registering thermometer on condition that a daily record of high and low temperatures be made and kept on file for at least one year.

Idem

- (5) All such records shall be made available to the district mining engineer. 1961-62, c. 81, s. 227.

Prohibition

291. No explosives shall be thawed near an open fire or steam boiler or by direct contact with steam or hot water in a mine or plant. 1961-62, c. 81, s. 228, *amended*.

TRANSPORTATION OF EXPLOSIVES AND BLASTING AGENTS — ON SURFACE

Application
of section

- 292.—(1) This section applies only on mine or plant premises and only on surface. *New*.

Transporta-
tion of
explosives,
etc., on
surface by
motor
vehicles

- (2) Every motor vehicle used for transporting explosives or blasting agents shall be maintained in sound mechanical condition. 1961-62, c. 81, s. 229 (1, 2), *amended*.

Markings

- (3) Every such motor vehicle shall be conspicuously marked by suitable signs or red flags easily visible from front and rear. 1961-62, c. 81, s. 229 (3).

Metal parts
to be
covered

- (4) The metal parts of every vehicle that may come in contact with containers of explosives or blasting

agents shall be suitably covered with wood, tarpaulin or other suitable material.

- (5) No other goods or materials shall be transported on any vehicle on which explosives or blasting agents are being transported. No other goods
 - (6) Every motor vehicle transporting more than 150 pounds of explosives or blasting agents shall be equipped with a fire extinguisher in working order, of adequate size and capable of dealing with a gasoline or oil fire. 1961-62, c. 81, s. 229 (4-6), *amended*. Fire extinguisher
 - (7) No motor vehicle shall be loaded with more than 80 per cent of its carrying capacity when transporting explosives or more than 100 per cent of its carrying capacity when transporting blasting agents. 1961-62, c. 81, s. 229 (7). Load limits
 - (8) Explosives or blasting agents transported on a vehicle shall be secured or fastened so as to prevent any part of the load from becoming dislodged. Load to be secured
 - (9) Detonators shall not be transported in the same vehicle as other explosives or blasting agents except in a suitable container in a separated compartment, and in such case the number shall not exceed 5,000 detonators. Detonators
 - (10) A vehicle transporting explosives or blasting agents shall not be left unattended. Not to be unattended
 - (11) Only those persons necessary for the handling of explosives or blasting agents shall travel on a vehicle that is transporting explosives or blasting agents. No surplus crew
 - (12) There shall be no smoking by persons on a vehicle that is transporting explosives or blasting agents. 1961-62, c. 81, s. 229 (8-12), *amended*. No smoking
- 293.—(1) When the day's supply of explosives or blasting agents is being transported in a shaft conveyance in a mine, the person in charge of the operation shall give or cause to be given notice of the operation to the deckman and hoistman. Transportation of explosives, etc., in shaft conveyances
- (2) No person shall,
 - (a) place in;
 - (b) have while in; orAuthorization to handle

(c) take out of,

a shaft conveyance of a mine any explosives or blasting agents except under the immediate supervision of a person authorized for the purpose by the responsible supervisor.

No other material in conveyance

- (3) No other material shall be transported with explosives or blasting agents in a shaft conveyance in a mine. 1961-62, c. 81, s. 230, *amended*.

Transfer of explosives or blasting agents from storage places

- 294.—(1) The transfer of explosives or blasting agents from the magazine or other surface storage place at a mine or plant shall be so arranged that no undue delay will occur between the time the explosives or blasting agents leave the surface storage place and the time they are properly stored in designated storage places in the mine or plant or distributed to points of use in the mine or plant.

Transfer without undue delay

- (2) Explosives or blasting agents shall not be left at a level station or near the shaft collar or other entrance to a mine but shall be transferred from a designated storage place to other designated storage places or points of use without undue delay. 1961-62, c. 81, s. 231, *amended*.

Transportation of detonators

- 295.—(1) Primers shall be made up as near to their point of use as is practicable in the interests of safety and then only in sufficient numbers for the immediate work in hand.

Suitable containers

- (2) Detonators, blasting caps, capped fuses, made-up primers, igniter cord or other explosives or blasting agents shall not be transported in a conveyance either on surface or underground at a mine or plant unless placed in separate, suitable, closed containers.

Kept separate from other explosives or blasting agents

- (3) A person may carry capped fuses with other explosives or blasting agents from the nearest storage place at a mine or plant to the point of use without placing them in a container if they are kept separate from other explosives and blasting agents.

Made-up primers

- (4) Made-up primers shall not be transported or carried at a mine or plant unless placed in separate, suitable, closed containers. 1961-62, c. 81, s. 232, *amended*.

Transportation of explosives, etc., underground, speed and right of way

- 296.—(1) Where explosives or blasting agents are transported in mine workings by means of mechanical haulage, including trackless equipment, the speed

of the vehicle shall not exceed 4 miles an hour and definite arrangements for the right of way of the vehicle shall be made before the vehicle is moved.

- (2) Where mechanical track haulage is used in a mine, ^{By mechanical track haulage}
 - (a) the locomotive shall be maintained on the forward end of the train transporting explosives or blasting agents unless some person walks in advance of the train to effectively guard it;
 - (b) any car carrying explosives or blasting agents shall be separated from the locomotive by an empty car or spacer of equivalent length; and
 - (c) in no case shall explosives or blasting agents be carried on the locomotive.
- (3) Where a trolley locomotive is used in a mine, the ^{By trolley locomotive haulage} car or cars transporting explosives or blasting agents shall be protected from trolley-wire contact and other existing hazards.
- (4) Where trackless equipment is used for the trans-^{By trackless equipment} portation of explosives underground in a mine, the requirements of section 292, except subsection 3, apply.
- (5) Where trackless equipment is used for the trans-^{Idem} portation of blasting agents in a mine, the requirements of section 292, except subsections 3 and 4, apply. 1961-62, c. 81, s. 233, *amended*.
297. Where parties working contiguous or adjacent ^{Blasting on contiguous claims} claims or mines disagree as to the time of setting off blasts, either party may appeal to the district mining engineer, who shall decide upon the time at which blasting operations thereon may be performed, and his decision is final and conclusive and shall be observed by them in future blasting operations. 1961-62, c. 81, s. 234, *amended*.
298. No explosive shall be removed from its original ^{Explosives not to be removed from original container} paper container or cartridge in a mine or plant. 1961-62, c. 81, s. 235.
299. No explosive shall be used to blast or break up ore, salamander or other material in a mine or plant where ^{Blasting of roast heaps} by reason of its heated condition there is any danger or risk of premature explosion of the charge. 1961-62, c. 81, s. 236.

- Size of drill holes 300. All drill holes in a mine or plant shall be of sufficient size to admit of the free insertion to the bottom of the hole of a cartridge of explosive. 1961-62, c. 81, s. 237.
- No iron or steel tools 301. In charging holes for blasting in a mine or plant, no iron or steel tool or rod shall be used, and no iron or steel tool shall be used in any hole containing explosives. 1961-62, c. 81, s. 238.
- Procedure before drilling 302.—(1) Before drilling is commenced in a working place in a mine the exposed face shall be washed with water and carefully examined for misfires and cut-off holes, giving special attention to old bottoms.
- Bootleg holes (2) No drilling shall be done in a mine within six inches of any hole that has been charged and blasted or any remnant of such hole.
- Holes containing explosives, etc. (3) No drilling shall be done in a mine within five feet of any hole containing explosives or blasting agents. 1961-62, c. 81, s. 239 (1-3).
- Precautions when loading (4) Drilling or undercutting and charging operations at a mine shall not be carried on simultaneously on the same face above or below each other or within twenty-five feet horizontal distance. 1961-62, c. 81, s. 239 (4), *amended*.
- Guarding entrances where blasting is done 303.—(1) Every blaster shall, before blasting, cause all entrances or approaches to the place where the blasting is to be done or where the safety of persons may be endangered by the blasting to be effectively guarded so as to prevent inadvertent access to such place while the charges are being blasted, including diamond drill holes as required by subsection 2 of section 275.
- Guarding roads (2) Subject to permission having been obtained, when required, from the appropriate authority, where it is necessary to stop traffic on a public road during a blasting operation,
- (a) an adequate number of flagmen equipped with suitable red flags shall be posted; and
 - (b) signs, such as "DANGER", "BLASTING" or "STOP FOR FLAGMAN", shall be posted,
- along the road at suitable locations to warn traffic approaching the flagman guarding the area. 1961-62, c. 81, s. 241 (1, 2), *amended*.

- (3) Posting of signs shall not be deemed to be adequate ^{Signs not adequate} protection for blasting operations. 1961-62, c. 81, s. 241 (3).
- (4) Every blaster shall, before blasting, give or cause to be given due warning in every direction by shouting "Fire" and shall satisfy himself that all persons have left the working place or the vicinity except those required to assist him in blasting and guarding. 1961-62, c. 81, s. 240 (1), *amended*.
- (5) Where the extent of the operation or the safe-guarding of persons underground in a mine renders the warning under subsection 3 ineffective, such additional precautions to those so required shall be taken to ensure that all areas of the mine, which may be affected by the blasting operation, are vacated. *New*.
- (6) In open pits or quarries where the extent of the operation or the exposure of persons renders the warning required under subsection 3 ineffective, due warning shall be given of a primary blast by siren or its equivalent in an approved manner, in addition to guarding as required by subsection 3. 1961-62, c. 81, s. 240 (2), *amended*.
304. Where possible, no connection between mine workings shall be made until a thorough examination of the working towards which the active heading is advancing has been made and has shown that the work can be proceeded with in a safe manner, and such point of connection shall be guarded as an entry when blasting within twice the length of the longest drill steel used or a minimum of fifteen feet of breaking through. 1961-62, c. 81, s. 242.
- 305.—(1) Except where fired electrically, no fuse shorter than three feet shall be used in any blasting operation in a mine or plant nor shall any fuse be lighted at a point closer than three feet from the capped end. 1961-62, c. 81, s. 243.
- (2) No drill hole in a mine shall be charged with explosives or blasting agents unless a properly prepared detonating agent is placed in the charge and it shall be fired in its proper sequence in one blasting operation. 1961-62, c. 81, s. 245.

- | | |
|--|---|
| Firing | (3) All drill holes in a mine that are charged with explosives or blasting agents in one loading operation shall be fired in one blasting operation. |
| Idem | (4) Any drill hole in a mine that has been charged with explosives or blasting agents or any explosive charge that has been set shall not be left unfired but shall be fired at the time for blasting required by the approved practice of the mine. 1961-62, c. 81, s. 246. |
| Safety fuses | (5) Where a safety fuse is used in a blasting operation in a mine,
(a) suitably capped fuses shall be supplied to the blasters in standard, uniform and safe lengths for the operation at hand; and
(b) the uncapped ends of all fuses for use in a mine shall be suitably identified. 1961-62, c. 81, s. 247, <i>amended</i> . |
| Lighting fuses | (6) Where more than one charge is to be fired, each fuse connected to a charge of explosives or blasting agents shall be lighted with a suitably-timed spitting device. |
| Number of men | (7) Where more than one charge is to be fired, no blaster shall be permitted to conduct any blasting operation unless he is accompanied by one or more other persons. |
| Idem, lights | (8) Every person engaged in a blasting operation shall carry a light unless the blasting operation is conducted on surface in daylight or under artificial light. 1961-62, c. 81, s. 248, <i>amended</i> . |
| Protection of entrance to working place | 306.—(1) Where blasting is done in a raise or stope, proper precautions shall be taken to prevent the closing of the means of entrance to the working place or interference with the effective circulation of air following the blast by the broken material produced by the blast. |
| Idem | (2) In the case of a single-compartment raise or box-hole where material from the blast may block the means of entrance, proper precautions shall be taken to ensure the adequate ventilation of the working place before a person enters it. 1961-62, c. 81, s. 250, <i>amended</i> . |
| Interval before return to scene of blast | 307.—(1) Where safety fuses were used in connection with a blast and two or more shots were fired, no blaster or other person shall leave or be permitted to leave his place of refuge from the blast and return |

to the scene of the blast within the number of minutes that are equal to twice the number of feet in the longest fuse used in the blasting operation.

- (2) Such period of time shall be calculated from the time ^{Idem} when the last shot was heard.
- (3) Where the firing was done by means of electric ^{Firing done electrically} delay-action detonators and any shot has been heard, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of any blast within ten minutes of the time at which the blasting circuit is closed.
- (4) Except when no shot was heard and a faulty circuit ^{Idem} is indicated, the circuit may be repaired immediately after the blaster has assured himself that the blasting switch is locked in the open position and the lead wires are short-circuited.
- (5) Where a safety fuse was used and a supposed misfire ^{Misfire or missed hole} or missed hole, including a reblasted misfire, occurs in a blasting operation, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of the blast within thirty minutes of the time of lighting of the fuse or fuses. 1961-62, c. 81, s. 244, *amended*.
- (6) When a blaster fires any charges, he shall, where ^{Missed holes, etc.} possible, count the number of shots.
- (7) If a misfire is suspected, he shall report it to his ^{Idem} supervisor.
- (8) If a missed hole has not been fired at the end of a ^{Idem} shift, that fact, together with the location of the hole, shall be reported by the supervisor to the supervisor in charge of the next relay of persons going into that working place before work is commenced by them.
- (9) Any charge of explosives that has missed fire shall ^{Idem} not be withdrawn but shall be blasted at a proper time and without undue delay, except that where a suitable device is used by an authorized person, the charge of explosives may be washed from the hole. 1961-62, c. 81, s. 251 (1-4), *amended*.
- (10) Any charge of blasting agent that has missed fire ^{Idem} may be washed out of the hole.

Idem

- (11) No development heading shall be abandoned or work therein discontinued until the material broken at the firing of the last round has been cleared from the face and the whole face of the heading examined for explosives or blasting agents in missed or cut-off holes. 1961-62, c. 81, s. 251 (5, 6).

Where
electric
blasting
required

- 308.—(1) After the first ten feet of advance has been made in a shaft or winze and until such time as the permanent timbers and ladders have reached the level upon which blasting is being done, all blasting in the shaft, winze, station or other workings being driven therefrom shall be done by means of an electric current.

In raises
over
50 degrees

- (2) In any raise, inclined at over 50 degrees from the horizontal, after twenty-five feet of advance has been made, or in any raise where free escape is not ensured at all times, all blasting shall be done by means of an electric current. 1961-62, c. 81, s. 252.

Electric
current
to be dis-
connected
after
blasting

309. Where blasting is done by means of an electric current, a person shall not enter or allow other persons to enter the place where the charges have been fired until he has disconnected and short-circuited the firing cables or wires from the blasting machine or portable direct-current battery or has assured himself that the switch of the approved blasting switch is open, the firing cables or wires short-circuited and the blasting box locked. 1961-62, c. 81, s. 253, *amended*.

Blasting by
direct
current or
blasting
machine

- 310.—(1) Where the source of current is a portable direct-current battery or a blasting machine, the firing cables or wires shall not be connected to the source of current until immediately before they are required for firing the charges and shall be disconnected immediately after the connection has been made and the machine operated for firing the charges. 1961-62, c. 81, s. 255.

Firing
cables,
how to be
used

- (2) The firing cables leading to the face shall be short-circuited while the leads from the blasting caps are being connected to each other and to the firing cables.

Idem

- (3) The short-circuit shall not be removed until the blaster and other persons have retreated from the face and it shall be so located that a premature explosion would be harmless to the persons opening the short-circuit.

- (4) The short-circuit shall be replaced immediately after the cables have been disconnected from the blasting machine or the circuit from the blasting switch has been opened. 1961-62, c. 81, s. 256, *amended*. ^{Idem}
- (5) The firing cables or wires used for firing charges at one working place shall not be used for firing charges in another working place until all proper precautions have been taken to ensure that such firing cables or wires have no connection with the leads from the first working place. ^{Idem}
- (6) When firing cables or wires are used in the vicinity of power and lighting cables, the blaster shall take proper precautions to prevent the firing cables or wires from coming in contact with the lighting or power cables. 1961-62, c. 81, s. 257. ^{Idem}
- (7) Where electricity, other than from a portable, hand-operated device, is used for firing charges, a fixed device of a design certified by the district electrical-mechanical engineer as meeting the requirements of section 515 shall be used. ^{Where electricity from supply line used}
- (8) One such device shall be maintained for each individual working place in which firing is done by means of electricity from lighting or power cables. 1961-62, c. 81, s. 254, *amended*. ^{Idem}

EXAMINATION OF MINE WORKINGS AND SHAFT INSPECTION

- 311.—(1) The manager of a mine or some authorized person or persons shall examine on each working shift all parts where drilling and blasting are being carried on, shall examine at least once a week the other parts in which operations are being carried on, such as shafts, winzes, levels, stopes, drifts, cross-cuts and raises, in order to ascertain that they are in a safe condition. ^{Examination of mine workings}
- (2) The manager of a mine or some authorized person or persons shall inspect and scale or cause to be inspected and scaled by a qualified person the roofs, walls and faces of all stopes or other working places as often as the nature of the ground and of the work performed necessitates. 1961-62, c. 81, s. 287, *amended*. ^{Idem. scaling}
- 312.—(1) The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to make an inspection of the shaft at least ^{Shaft inspection}

once each week, and in addition a thorough examination shall be made at least once each month of the guides, timber, walls and hoisting compartments generally of the shaft, and a record of such inspection and examination shall be made in the Shaft Inspection Record Book by the person making the examination.

Shaft
Inspection
Record
Book

- (2) Every such manager shall keep or cause to be kept at the mine a book for each shaft termed the Shaft Inspection Record Book in which shall be recorded a report of every such examination, as is referred to in this section, signed by the persons making the examination. 1961-62, c. 81, s. 288 (1, 2), *amended*.

Entries
to be
initialled

- (3) Such entries of examinations shall be read and initialled every week by the person in charge of the maintenance of the shaft.

Dangerous
conditions
noted

- (4) A notation shall be made of any dangerous condition reported and the action taken regarding it over the signature of the person in charge of the maintenance of the shaft.

Available
to engineer

- (5) The Shaft Inspection Record Book shall be made available to an engineer at all times. 1961-62, c. 81, s. 288 (3-5).

LADDERWAYS AND LADDERS

Ladderways
in shafts
and winzes

- 313.—(1) A suitable footway or ladderway shall be provided in every shaft and winze.

Not in
vertical
position

- (2) In shafts and winzes, no ladder, except an auxiliary ladder used in sinking operations, shall be installed in a vertical position. 1961-62, c. 81, s. 289 (1, 2).

Sinking
operations

- (3) During sinking operations, if a ladder is not maintained to the bottom, an auxiliary ladder that will reach from the permanent ladders to the bottom shall be provided in such convenient position that it may be promptly lowered to any point at which a person is working. 1961-62, c. 81, s. 289 (3), *amended*.

Headframes

- (4) Wherever, about shafts and winzes and headframes used in conjunction therewith, it is necessary for persons to examine or inspect appliances installed therein, suitable ladderways or stairways and platforms shall be maintained to permit such work to be carried out in a safe manner. 1961-62, c. 81, s. 289 (4).

314. The footway or ladderway in a shaft or winze shall be separated from the compartment or division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290. Partition between manway and hoisting compartments
- 315.—(1) In a shaft or winze inclined at over 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body, and the ladders shall be so placed as to cover this opening in the platform. Ladderway in shaft, over 70 degrees
- (2) In a shaft or winze inclined at less than 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, the ladders may be continuous, but substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body. 1961-62, c. 81, s. 291, *amended*. Idem, under 70 degrees
- 316.—(1) Stairways may be used in a shaft or winze inclined at less than 50 degrees from the horizontal. When stairway permissible
- (2) All stairways in shafts and winzes shall be equipped with a suitably placed hand-rail. 1961-62, c. 81, s. 292. Hand-rail
- 317.—(1) All ladderways in raises, stopes and other manways shall be installed and maintained in a safe condition to reduce to a minimum the hazard of a person falling therefrom. Ladderways, other mine workings
- (2) In manways inclined at 70 degrees or more, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders shall be off-set at the platforms. Landing platforms
- (3) In manways inclined at less than 70 degrees and more than 50 degrees, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders may be continuous. Idem
- (4) In manways inclined at 50 degrees or less, the ladders may be continuous and no platforms are required except at points of off-set. 1961-62, c. 81, s. 293, *amended*. Idem

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| Wire rope ladders | 318. Wire rope or strands of wire rope shall not be used or be allowed to be used for climbing purposes if they are frayed or have projecting broken wires. 1961-62, c. 81, s. 294. |
| Hand-rails for ladders | 319. Every ladder shall project at least three feet above its platform, except where strong hand-rails are provided. 1961-62, c. 81, s. 295. |
| Ladders | 320.—(1) Every ladder shall be of strong construction, shall be securely placed and shall be maintained in a safe condition. |
| Distance between rungs | (2) The distance between the centres of rungs of ladders shall be not more than twelve inches and not less than ten inches, and the spacing of rungs shall not vary more than one-half inch in any ladderway. |
| Distance from wall | (3) In order to give a proper foothold, the rungs of ladders shall in no case be closer than four inches from the wall of a shaft, winze or raise or any timber underneath the ladder. 1961-62, c. 81, s. 296, <i>amended</i> . |

HOISTS AND HOISTING

SINKING EQUIPMENT

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|----------------------------------|---|
| When crosshead required | 321.—(1) After a depth of 300 feet below the sheave has been attained in the sinking of a vertical shaft or winze at a mine, a suitable bucket and crosshead, as referred to in subsection 2 and in section 322, shall be used. 1961-62, c. 81, s. 336 (1), <i>amended</i> . |
| Suspension, barrel-shaped bucket | (2) When a closed type of crosshead is not used, the bucket shall be barrel-shaped and shall be suspended by the upper rim. 1961-62, c. 81, s. 336 (2). |
| Safety appliance on crosshead | 322.—(1) All sinking crossheads at a mine shall be provided with a safety appliance of a design approved by the district electrical-mechanical engineer for attaching the bucket to the crosshead, so constructed that the crosshead cannot stick in the hoisting compartment without also stopping the bucket. |
| Approval | (2) All crossheads shall be of a design approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 337, <i>amended</i> . |

SHAFT CONVEYANCES, CONSTRUCTION AND OPERATION

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| Protection of men in shaft conveyances | 323. No cage or skip shall be used in a mine for the raising or lowering of persons unless it is constructed so as |
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to prevent any part of the body of a person riding in it from accidentally coming into contact with the timbering or sides of the shaft or winze. 1961-62, c. 81, s. 338, *amended*.

324. All cages and skips used for lowering or raising persons in a mine shall comply with the following: Construction of cages and skips, etc.

1. The hood shall be made of steel plate not less than three-sixteenths of an inch in thickness or of a material of equivalent strength.
2. The cage shall be provided with sheet-iron or steel side-casing not less than one-eighth of an inch in thickness or of a material of equivalent strength, and the casing shall extend to a height not less than five feet above the floor of the cage.
3. The cage shall be equipped with doors made of suitable material that extend to a height not less than five feet above the floor.
4. The doors shall be so arranged that it is impossible for the doors to open outward from the cage.
5. Doors shall be fitted with a suitable latch and shall have a minimum clearance at the bottom.
6.
 - i. The safety catches and mechanism shall be of sufficient strength to hold the shaft conveyance with its maximum load at any point in the shaft and shall be of a type the design of which has been approved by the chief engineer.
 - ii. Such safety catches and mechanism shall not be used until approved by the district electrical-mechanical engineer and such approval shall be based upon test performance.
 - iii. Such approval shall not be considered until the safety catches and mechanism are found to function satisfactorily under load conditions during such number of tests as are required by the chief engineer, each test to consist of suddenly releasing the shaft conveyance

in a suitable manner under maximum loading conditions for persons so that the safety catches will have the opportunity to grip the guides when the conveyance is descending at maximum rated speed.

- iv. A report of such tests shall be submitted to the chief engineer.
7. Before a shaft conveyance equipped with an approved type of safety catches and mechanism is first used for the purpose of lowering and raising persons, the safety catches and mechanism shall be found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test under the same conditions as set out in paragraph 6, and a permit for the use of the conveyance for lowering and raising men shall be obtained from the district mining engineer.
8. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
9. A shaft conveyance previously permitted for use by the district mining engineer for the purpose of lowering or hoisting persons on which alterations or repairs to the safety catch mechanism necessary to rectify any distortion of the mechanism from its proven satisfactory position are made shall not be put to such use until the safety catch and mechanism have been found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test made under the same conditions as set out in paragraph 6, and the district mining engineer has again issued permission for the use of the conveyance for such purpose.
10. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
11. A certificate of load capacity of the conveyance and attachments, which shall include the weight of the tail rope, if any, or other

suspended load, shall be obtained from the manufacturer and made available to the district electrical-mechanical engineer.

12. Devices for attaching the conveyance to the rope shall have a factor of safety of not less than 10.
13. The bails and suspension gear of all shaft conveyances shall be cleaned and thoroughly inspected at least once in every twelve months and a record of such inspection shall be made in the Hoisting Machinery Record Book. 1961-62, c. 81, s. 339, *amended*.
325. The chief engineer may give permission in writing for hoisting men without safety catches if he is satisfied that the equipment and conditions are such that maximum safety is provided. 1961-62, c. 81, s. 340. Hoisting without safety catches
326. The cage shall not have chairs attached to it that are operated by a lever or a chain through or from the floor of the cage. 1961-62, c. 81, s. 341. Operating chairs by lever
327. When chairs are used for the purpose of landing a shaft conveyance at any point in a shaft or winze, other than at the lowest point of travel for a skip, they shall be so arranged that they automatically fall clear and remain clear of the hoisting compartment when the cage or other conveyance is lifted off. 1961-62, c. 81, s. 342. Automatic operation of chairs
328. The bucket and any device such as the bail, safety latch or other attachment to the bucket shall be of a design approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 343, *amended*. Bails, safety latches, etc.

HOIST BRAKES

- 329.—(1) Every device used for lowering into or hoisting from mine workings shall be equipped with a brake or brakes that may be applied directly to each drum so as to safely stop and hold the drum when carrying its maximum load. 1961-62, c. 81, s. 353 (1), *amended*. Brakes required
- (2) The brakes shall be so arranged that they can be tested separately and, whether the hoist is at work or at rest, can be easily and safely manipulated by the hoistman when at the levers controlling the hoist. Arranged to test separately

Not operated by foot	(3) No hoist used for lowering or raising persons or for shaft sinking shall be equipped with a brake or brakes operated by means of the hoistman's foot, unless such brake is an auxiliary electrical device.
Adjustments to be maintained	(4) The adjustments of the brake or brakes and brake mechanism shall be maintained in such condition that the brake lever or any other part of the brake mechanism will not come to the limit of travel before the normal power of the brake or brakes is applied.
Loss of brake pressure	(5) All brake engines shall be so equipped that, in the event of inadvertent or accidental loss of pressure in the brake system, the brakes can be applied.
Brake for friction hoists	(6) The brakes for a friction hoist shall be designed, adjusted and maintained to safely stop and hold the conveyance under all conditions of loading, direction of travel and speed. 1961-62, c. 81, s. 353 (2-6).
Brakes	(7) At all times that persons are in or on a shaft conveyance, the hoist shall be equipped with more than one brake, each capable of stopping and holding the drum or drums in use.
Clutched-in drum	(8) In shaft inspection, maintenance or sinking operations, persons may be in or on a shaft conveyance attached to the fixed or clutched-in drum when changing balance. 1961-62, c. 81, s. 353 (7), <i>amended</i> .
Automatic operation	(9) At least one of the brakes required shall be arranged for automatic application upon operation of any of the safety devices for brake application.
Freedom of falling weights	(10) In a brake system where weights are used to furnish auxiliary pressure on loss of air, the weights shall be tested at least once every twenty-four hours to ensure their freedom of movement.
Single drum air or steam	(11) In the case of single drum air or steam driven hoists, automatic valves to control engine compression, arranged for operation by the safety devices, may serve as a brake. 1961-62, c. 81, s. 353 (8-10).
Idem	(12) The arrangements mentioned in subsection 11 are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 353 (11), <i>amended</i> .

HOIST CLUTCHES

330. The device for operating the clutch of the drum shall be provided with adequate means to prevent the inadvertent withdrawal or insertion of the clutch. Clutch-locking arrangement
1961-62, c. 81, s. 354.
331. The brake and clutch operating gear shall be so installed that it will not be possible to unclutch a drum unless the brake or brakes on the drum are applied, nor shall it be possible to release the brake or brakes until the clutch of the drum is engaged. Interlocking brake and clutch
1961-62, c. 81, s. 355.

HOIST DRUMS

332. Such bolts and other fittings of the drums, brakes and clutches as might be a danger in the event of their becoming loosened shall be rendered secure by means of suitable locking devices other than spring lockwashers. Securing of drum parts
1961-62, c. 81, s. 356.
333. On the drum of every hoist used for lowering or raising persons, there shall be flanges and also, if the drum is conical, such other appliances as are sufficient to prevent the rope or cable from slipping off. Slipping of rope on drum
1961-62, c. 81, s. 357.
- 334.—(1) In all hoist installations, the dimensions of the drum or drums shall be suitable for the kind, diameter and length of the rope in service. Suitability of hoist drum for rope
- (2) The diameters of the hoist drums shall be large enough to prevent the occurrence of unduly large bending stresses in the rope. Bending stresses in rope
- (3) Where multiple-layer winding is used, proper arrangements shall be made and maintained to permit the rope to rise evenly from one layer to another and to wind properly without cutting down through any lower layer. Rope risers
1961-62, c. 81, s. 358.
- 335.—(1) On and after the 15th day of June, 1948, in all installations of newly-acquired drum hoists and modifications of existing hoists designed to increase the load ratings of the hoist, Drum hoist installations
- (a) all hoist drums over sixty inches in diameter shall have grooving properly machined to fit the rope used, except that, in the case of shaft sinking, preliminary development operations and operations of a temporary nature, hoists with plain drums may be used;

- (b) the drums shall have sufficient rope-carrying capacity to permit hoisting from the lowest regular hoisting point to the highest point of travel in the shaft without the necessity of winding more than three layers of rope on the drum;
- (c) the diameter of a hoist drum shall be not less than 80 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch and shall be not less than 60 times the diameter of the rope in use when the diameter of the rope is not greater than one inch, except that, in the case of shaft-sinking and preliminary development operations,
 - (i) a hoist may be used having a drum whose diameter is not less than 60 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch, and
 - (ii) a hoist may be used having a drum whose diameter is not less than 48 times the diameter of the hoisting rope in use when the diameter of the rope is not greater than one inch; and
- (d) the hoist and the head sheaves shall be so located in relation to one another as to permit the proper winding of the rope on the hoist drum.

Change of
location

- (2) In any change of location of a hoist installed prior to the coming into force of this section, the requirements of clause *b* of subsection 1 apply. 1961-62, c. 81, s. 359 (1, 2).

Friction
hoist
installations

- (3) In friction hoist installations,
 - (a) the drum diameter of every friction hoist installed on or after the day on which this Part comes into force shall be not less than 100 times the diameter of the rope in use;
 - (b) the hoist drive, control and brakes shall be so designed and maintained that slippage of the rope on the drum will not occur under normal operating conditions; and

- (c) the rope treads shall be inspected regularly and maintained in good condition. 1961-62, c. 81, s. 359 (3), *amended*.

SHEAVES

- 336—(1) Head and deflection sheaves shall be machined and maintained to fit the rope properly. Head and deflection sheaves
- (2) The diameter of a head sheave shall be determined by clause *c* of subsection 1 of section 335 as required for a hoist drum. 1961-62, c. 81, s. 360 (1, 2), *amended*. Diameter of head sheaves
- (3) The diameter of a deflection sheave shall be determined by, Diameter of deflection sheaves
- (a) in the case of a drum hoist system, clause *c* of subsection 1 of section 335; and
 - (b) in the case of a friction hoist system, clause *a* of subsection 2 of section 335. *New*.
337. Utility hoists, including tugger hoists, ropes and other equipment used in connection with the installation, shall be maintained in a safe working condition. 1961-62, c. 81, s. 277, *amended*. Care of utility hoists

INDICATORS

- 338.—(1) Every hoist shall, in addition to any marks on the rope or drum, be provided with a reliable depth indicator that will clearly and accurately show to the operator, Indicator required
- (a) the position of the bucket, cage or skip;
 - (b) at what position in the shaft a change of gradient necessitates a reduction in speed;
 - (c) the overwind or underwind position of the shaft conveyance or counter-balance; and
 - (d) the position above or below the limits as in clause *c* beyond which the conveyance is not to move. 1961-62, c. 81, s. 363 (1), *amended*.
- (2) Hoist depth indicators shall be driven by a reliable means. Operation of indicator
- (3) Means shall be provided on a friction hoist to adjust the depth indicators and protective devices on the hoist to the position of the conveyance in the shaft. Means to adjust indicator on friction hoist 1961-62, c. 81, s. 363 (2, 3).

OVERWINDING, ETC. — AIR HOISTS AND STEAM HOISTS

- Overwind and underwind protection
- 339.—(1) Air hoists and steam hoists shall be provided with suitable overwind, underwind and emergency protection for the hoisting conveyance, except that, in shaft-sinking, the underwind protection is not required. 1961-62, c. 81, s. 361, *amended*.
- Tapered guides
- (2) In a friction hoist installation, tapered guides or other approved devices shall be installed above and below the limits of regular travel of the conveyance and arranged so as to brake and stop an overwound or underwound conveyance in the event of failure of other devices. 1961-62, c. 81, s. 365, *amended*.
- Gauge required
340. At all air hoists and steam hoists, there shall be installed within plain view of the operator a gauge to indicate the air or steam pressure, as the case may be. 1961-62, c. 81, s. 362, *amended*.

SPECIFICATIONS AND SPECIAL TESTING

- Specifications required
- 341.—(1) The specifications of hoists and equipment and the general arrangement of the headframe in new installations and in shaft deepening projects shall be approved by the chief engineer.
- Commissioning tests
- (2) Before a new hoisting installation is put in service, tests shall be conducted to prove its compliance with this Act.
- Record kept available
- (3) A record of such tests and the results obtained shall be kept on file and made available to the district electrical-mechanical engineer.
- Special testing by the district electrical-mechanical engineer
- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific tests of the efficiency of all brakes, clutches, overwind devices or other hoist controls. 1961-62, c. 81, s. 364, *amended*.

NON-DESTRUCTIVE TESTING

- New equipment
- 342.—(1) All shafts for hoists and controls, brake rods and other vital parts which could affect the safety of the equipment shall be non-destructively tested before the hoist is placed in service.

- (2) Hoist and sheave wheel shafting, hoist brake and control parts, conveyance drawbars, pins and structural members and other hoisting equipment affecting the safety of the installation shall be non-destructively tested at regular intervals or as required by the district electrical-mechanical engineer. ^{Equipment in service}
- (3) Dates of the non-destructive testing shall be recorded in the Machinery Record Book and the results shall be reported to the district electrical-mechanical engineer. ^{Reports of tests}
- (4) The non-destructive testing shall be carried out by methods acceptable to the chief engineer. *New.* ^{Approved methods}

EXAMINATION

343. The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to examine at least once in each week, ^{Examination of hoisting equipment}

- (a) deflection, head and idler sheave wheels;
- (b) attachments of the hoisting ropes to the drums and to the counterweights, buckets, cages or skips;
- (c) brakes;
- (d) interlocks;
- (e) depth indicators;
- (f) buckets;
- (g) counterweights;
- (h) cages;
- (i) skips;
- (j) external parts of the hoist;
- (k) mechanical hoisting signalling equipment, if any;
- (l) shaft dumping and loading arrangements;
- (m) sinking doors and blasting sets, and any attachments thereto;

(n) attachments to any cage, skip or bucket for any underslung regularly-used equipment; and

(o) guide or rubbing rope tensioning devices and attachments,

and to record the report of such examination in a book called the Hoisting Machinery Record Book. 1961-62, c. 81, s. 366, *amended*.

HOISTING MACHINERY RECORD BOOK

Entering of
reports

344.—(1) The manager shall keep or cause to be kept at the mine the Hoisting Machinery Record Book referred to in section 343, in which shall be entered a report of every examination or report referred to in sections 324 and 343, subsection 2 of section 355, subsection 3 of section 359 and sections 360 and 361, and a notation of any failure of, accident to, correction or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, signed by the person making the examination or report.

Entries
to be
signed

(2) Such entries shall be read and signed each day, week or month, as required by this Act, by the person in charge of such equipment or accessories thereto.

What
to be
entered

(3) A notation shall be made in the Hoisting Machinery Book of the action taken regarding the report of any failure of, accident to, corrections or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, over the signature of the person in charge of such equipment or accessories thereto.

Books
to be
available

(4) The Hoisting Machinery Record Book shall be made available to the engineer at all times. 1961-62, c. 81, s. 386, *amended*.

HOISTING ROPES

Rope
connection

345.—(1) The connecting device between the hoisting rope and the bucket, cage, skip, counterweight or other device shall be of such nature that the risk of accidental disconnection is reduced to a minimum.

To be
approved

(2) Such connecting device shall be of a design approved by the chief engineer.

- (3) No open-hook device shall be used for such purpose. No open hooks
- (4) The drum end of the rope shall be fastened to the spider of the drum or around the drum shaft in some suitable manner. 1961-62, c. 81, s. 368, *amended*. Fastened to spider on a drum hoist
- (5) The rope from the counterweight shall be attached to the drum of the hoist and not to the shaft conveyance in drum hoist installations. 1961-62, c. 81, s. 384. Counter-weight
346. In no case shall a rope that has been spliced be used for hoisting purposes. 1961-62, c. 81, s. 369. Splicing prohibited
- 347.—(1) No drum hoist shall be operated with less than three turns of rope on the drum when the bucket, cage or skip is at the lowest point in the shaft from which hoisting is effected. Length of rope required on drum hoist
- (2) No drum hoist shall be operated with more than three complete layers of rope on the drum when the conveyance is at the highest point of travel in the shaft. 1961-62, c. 81, s. 370, *amended*. Three layers only on drum
- 348.—(1) No hoisting rope, tail rope, guide rope, or rubbing rope shall be used that has not been tested by the Ontario Government Cable Testing Laboratory and for which a certificate of the test is not in the possession of the user. Test certificate
- (2) In friction hoist installations, where multiple ropes are used and when manufactured have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes, Number of test specimens required
- (a) in the case of four ropes, two specimens shall be required;
- (b) in the case of three ropes, two specimens shall be required;
- (c) in guide and rubbing rope installations and where these ropes have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes.
- (3) No hoisting rope, tail rope, guide rope or rubbing rope shall be used that is not accompanied by a certificate from the manufacturer giving the following information: Manufacturer's certificate

1. Name and address of manufacturer.
2. Manufacturer's rope number.
3. Date of manufacture.
4. Diameter of rope in inches.
5. Weight per foot in pounds.
6. Rope construction.
7. Class of core.
8. Trade name of interior rope lubricant.
9. Number of wires in strand.
10. Grade of steel.
11. Diameter of wires in decimals of an inch.
12. Breaking stress of steel of which the wire is made in pounds per square inch.
13. Standard torsion test of wires.
14. Actual breaking load of rope, as provided by the certificate referred to in subsection 1.
15. Length of rope.

Rope data
to be
entered in
Rope
Record
Book

- (4) When a rope is put into service in a shaft compartment or hoisting way, the data mentioned in subsection 3 shall be entered in a book called the Rope Record Book, together with the following information:

1. Name of person from whom purchased.
2. Date of purchase.
3. Date put on in present location.
4. Identification number of rope.
5. Name of shaft or winze and compartment in which rope is used.
6. Weight of shaft conveyance.

7. Weight of material carried, or weight or tension applied to guide or rubbing rope.
 8. Maximum length of rope in service below sheave or total length of guide or rubbing rope.
 9. Maximum weight of rope in service below sheave or total weight of guide or rubbing rope.
 10. Static factors of safety at conveyance suspension and at head sheave with rope fully let out, or at guide or rubbing rope suspension point.
 11. Date put on and removed from previous locations, if any.
- (5) A copy of such entries shall be forwarded to the chief engineer at the time the rope is put on in any location. Information to be sent to chief engineer
- (6) The manager shall keep or cause to be kept at the mine a book called the Rope Record Book, in which shall be recorded, in addition to the information referred to in subsections 3 and 4, the following information: Rope Record Book
1. A history of the rope, giving the date on which the rope was first put on.
 2. Dates of shortening.
 3. Dates and results of breaking and electromagnetic tests.
 4. Date and reason for taking out of service, for each occasion the rope is put into and taken out of service.
- (7) The Rope Record Book shall be available to the district electrical-mechanical engineer. Rope Record Book open to engineer
- (8) When a hoisting rope, tail rope, guide or rubbing rope is taken out of service from a shaft compartment, notice to that effect shall be forwarded to the chief engineer, giving the date, the reasons for discarding or discontinuing the use of the rope, disposition of the rope, and such other information as he requires. 1961-62, c. 81, s. 371, *amended*. Notification of rope discarded

Permission
required
to use
old rope

349.—(1) No hoisting rope, tail rope, guide or rubbing rope that has previously been in use in a place beyond the control of the manager shall be put in service anew, except with the permission in writing of the chief engineer.

Request for
permission

(2) Request for permission to use such rope shall be accompanied by certification that the rope has been properly examined and that no apparent defects have been found.

Electro-
magnetic
test

(3) The rope shall be electro-magnetically tested throughout its length and copies of the results, together with the interpretations, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test was made. 1961-62, c. 81, s. 372, *amended*.

Precautions,
used ropes

350. No hoisting rope, tail rope, guide or rubbing rope that has been removed from service shall be put in service anew for the purpose of lowering or raising persons, unless proper measures have been taken for the maintenance of the rope and the manager is satisfied that the rope is in safe working condition. 1961-62, c. 81, s. 373, *amended*.

Rope
removal

351. When a shaft compartment has been abandoned for hoisting purposes, the hoisting rope shall be removed immediately from the shaft. 1961-62, c. 81, s. 374, *amended*.

Rope not
to be
reversed

352. No hoisting rope shall be reversed until application in writing has been made therefor to the chief engineer, and the application shall be accompanied by the results and interpretations of the most recent electro-magnetic test and until the approval in writing has been received from the chief engineer. 1961-62, c. 81, s. 375, *amended*.

Safety
factor of
ropes,
interpre-
tation

353.—(1) For the purpose of this section, the factor of safety of the hoisting rope, tail rope, guide or rubbing rope in a shaft or winze of a mine means the number of times the breaking strength of the rope is greater than the total weight supported by the rope at a definite place in the rope.

Breaking
strength
of ropes,
interpre-
tation

(2) The breaking strength of the rope means the breaking strength of the rope as shown in the test certificate issued by the Ontario Government Cable Testing Laboratory before the rope is installed, as required by subsection 1 of section 348.

- (3) Every hoisting rope, when newly installed on a drum hoist, shall have a factor of safety of not less than 8.5 at the end of the rope where it is attached to the conveyance and where the total weight consists of the combined weight of the conveyance and the maximum load to be carried. Safety factor of drum hoist ropes
- (4) In addition, the hoisting rope, when newly installed, shall have a factor of safety of not less than 5 at the point where the rope leaves the head sheave and, the rope being fully let out, the total weight consists of the combined weight of the conveyance plus the maximum load to be carried plus the weight of that part of the rope that extends from the head sheave to the conveyance. Idem
- (5) The factor of safety of the hoisting ropes for a given friction hoist installation is the lowest actual breaking strength, as determined by the Ontario Government Cable Testing Laboratory, for the ropes, times the number of ropes, divided by the sum weight of the conveyance and attachments, the maximum conveyance load carried and the maximum weight of rope suspended in one compartment of the shaft. Safety factor for friction hoist ropes
- (6) When the hoisting rope is installed on a friction hoist, the factor of safety shall be not less than that determined from the following formula: $F. of S. = 8.0 - .0005 d$, where d is the maximum length of rope suspended below the head sheave in feet. Idem
- (7) For friction hoists, the factor of safety of the hoisting ropes shall be not less than 5.5 for any depth of shaft when the ropes are installed. Idem
- (8) The factor of safety of tail ropes shall be not less than 7 when installed. Safety factor of tail ropes
- (9) The factor of safety of guide and rubbing ropes shall be not less than 5 when installed. 1961-62, c. 81, s. 376, *amended*. Safety factor of guide and rubbing ropes
- 354.—(1) No hoisting rope shall be used in a shaft or winze of a mine where in any part of the rope, Rope discard criteria
- (a) the existing strength has decreased to less than 90 per cent of the original strength of the rope;
 - (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;

- (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
- (d) marked corrosion occurs;
- (e) the rate of stretch in a friction hoisting rope begins to show a rapid increase over the normal stretch noted during its service. 1961-62, c. 81, s. 377, *amended*.

Idem

- (2) No tail rope, guide or rubbing rope shall be used in a shaft where in any part of the rope,
 - (a) the existing strength has decreased to less than 75 per cent of the original strength of the rope;
 - (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;
 - (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
 - (d) marked corrosion occurs. *New*.

Rope dressing

- 355.—(1) The rope dressing used on a drum hoisting rope shall be suited to the operating conditions of the rope, and the dressing shall be applied at least once in every month and as often as is necessary to maintain the coating on the rope in good condition.

Idem

- (2) Every time the rope is dressed, a report of the treatment shall be recorded in the Hoisting Machinery Record Book and signed by the person who performed the work. 1961-62, c. 81, s. 378.

Testing of hoisting ropes

- 356.—(1) After 18 months of service, and thereafter at intervals of six months, the hoisting rope of a drum hoist shall have a portion not less than 8 feet in length cut off the lower end from a position above the clamps or other attachment.

Idem

- (2) The portion of rope so cut shall have the ends adequately fastened with binding wire before the cut is made to prevent the disturbance of the strands and it shall be sent to the Ontario Government Cable Testing Laboratory for a breaking test. 1961-62, c. 81, s. 379 (1, 2), *amended*.

- (3) The certificate of the test shall be kept on file and a ^{Recording of test} summary thereof recorded in the Rope Record Book. 1961-62, c. 81, s. 379 (4).
- (4) All hoisting ropes on drum hoists and friction hoists ^{Electro-magnetic testing} shall be tested throughout their working length by an electro-magnetic testing device within the first six months of service, and thereafter at intervals of four months, or as required by the chief engineer.
- (5) All tail ropes, guide and rubbing ropes shall be ^{Idem} electro-magnetically tested at the end of twelve months service, and thereafter at such intervals as is necessary to ensure that the rope is in safe condition.
- (6) The electro-magnetic testing service and the agency ^{Idem} or company supplying such service shall be approved by the chief engineer.
- (7) The dates and results of the electro-magnetic tests ^{Tests to be recorded} shall be entered in the Rope Record Book.
- (8) Records of each electro-magnetic test, including ^{Submission of results} graphs and interpretations, over the signature of the person making the interpretation, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test is made. *New.*
- 357.—(1) The chief engineer may require that test ^{Special testing of used hoisting ropes} specimens be cut from any rope discarded for use in mine hoisting at points specified by him and sent to the Ontario Government Cable Testing Laboratory for special testing and investigation if he is of the opinion that such testing and investigation are in the interests of better mine hoisting practice.
- (2) No charge shall be made for such special testing and ^{No charge for testing} investigation, but the mine is responsible for the cost of cutting, preparation and shipment of the test specimens. 1961-62, c. 81, s. 380, *amended.*

CLEARANCE FOR TAIL ROPES

358. Water and spillage in a shaft sump in a mine shall ^{Tail ropes to be clear} be kept at such a level at all times that,
- (a) tail ropes have clear passage; and
 - (b) guide and rubbing rope connections and tension devices are clear. 1961-62, c. 81, s. 381, *amended.*

ROPE ATTACHMENTS

Examina-
tion of
attachments

359.—(1) Any rope in hoisting service when newly put on, and after any subsequent loosening of the connecting attachments between the rope and the bucket, cage, skip or counterweight and the connection between the rope and the hoist drum, shall have the attachments carefully examined by a qualified person or persons authorized by the manager and shall not be used for ordinary transport in a shaft or winze until two complete trips up and down the working parts of the shaft or winze have been made with the bucket, cage, skip or counterweight bearing its authorized load, and the connecting attachments have been re-examined. 1961-62, c. 81, s. 382 (1), *amended*.

Record
to be kept

(2) The hoistman shall make a record of such two complete trips in the Hoistman's Log Book.

Results
to be
recorded

(3) The results of the examination of the connecting attachments between the bucket, cage, skip or counterweight and hoist drum and the rope shall be recorded in the Hoisting Machinery Record Book and signed by the person making the examination. 1961-62, c. 81, s. 382 (2, 3).

Cleaning
and exam-
ination
of rope
connections

360.—(1) In drum hoist installations, after every six months of service, that portion of the rope at the conveyance end within the clamps shall be cut off and discarded.

Idem

(2) At such time, the connection between the rope and the drum shall be thoroughly cleaned and examined.

Idem

(3) In friction hoist installations, after every six months of service, the position of the hoisting rope within the clamps shall be changed, if practicable, or that portion of the rope within the clamps shall be thoroughly cleaned and examined.

Idem

(4) Every six months, the tail rope, guide and rubbing rope attachments and tensioning devices shall be thoroughly cleaned and examined. 1961-62, c. 81, s. 383, *amended*.

EXAMINATION OF ROPES AND SAFETY APPLIANCES

Examina-
tion of
ropes and
safety
appliances

361.—(1) The manager shall depute a competent person or persons who shall examine,

- (a) at least once in each day, the exterior of the hoisting rope and tail rope to detect the presence of kinks or other visible damage and to note the appearance of the rope dressing;
- (b) at least once in each month, the structure of that portion of the hoisting rope that is not on the hoist drum when the conveyance is at its lowest stopping point, and the tail, guide and rubbing ropes, with a view to ascertaining the deterioration thereof, and for the purpose of this examination the rope shall be cleaned at points selected by such person or persons, who shall note any reduction in the diameter or circumference of and the proportion of wear in the rope, and the starting point of the examination shall be changed slightly from month to month in order to obtain more complete information, but any portion showing appreciable reduction in diameter or circumference or appreciable wear shall be checked when the rope is again examined;
- (c) at least once in each month, the portion of the rope that normally remains on the drum of a drum hoist when the conveyance is at its lowest stopping point, and shall lubricate such portion, and, if, during the examination of the rope, significant deterioration is found in the portion on the drum or at the cross-over points, the rope shall be shortened sufficiently to eliminate any crushed portion or to change the position of the cross-over points if either or both are necessary;
- (d) at least once in each day, the safety catches, if any, of the conveyance, to be sure they are clean, sharp and in proper adjustment and working condition;
- (e) at least once in every three months, the safety catches of the cage or other shaft conveyance so equipped by testing the same, such test to consist of releasing the empty conveyance suddenly in some suitable manner from rest so that the safety catches have the opportunity to grip the guides, and, in case the safety catches do not act satisfactorily, the cage or other shaft conveyance shall not be used further for lowering or raising men until the

safety catches have been repaired and have been proved to act satisfactorily, as referred to in paragraph 11 of section 324. 1961-62, c. 81, s. 385 (1), *amended*.

Stretch
to be
recorded

- (2) In friction hoist installations, the stretch of the hoisting rope or ropes shall be measured and recorded in the Friction Hoist Machinery Record Book.

Rope
diameters
and broken
wires to be
recorded

- (3) In friction hoist installations, measurement of rope diameters and the location and number of broken wires shall be recorded monthly in the Friction Hoist Machinery Record Book. 1961-62, c. 81, s. 385 (2, 3).

Engineer
may
conduct
tests

- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or cause to be conducted specific tests of the safety catches with which a conveyance is equipped.

Defects
to be
remedied
at once

- (5) If on examination there is discovered any weakness or defect whereby the safety of persons may be endangered, the weakness or defect shall be immediately reported to the manager or person in charge and, until the weakness or defect is remedied, the hoisting plant shall not be used. 1961-62, c. 81, s. 385 (4, 5), *amended*.

Recording
of examina-
tion and
reports

- (6) It is the duty of the person referred to in subsection 1 to record the reports of all examinations therein referred to and also to record all reports referred to in subsection 5 in a book called the Hoisting Machinery Record Book or the Friction Hoist Machinery Record Book, whichever is applicable. 1961-62, c. 81, s. 385 (6).

HOIST LOADING

Interpre-
tation

- 362.—(1) In this section,

- (a) "authorized maximum load of persons" means the total weight of persons permitted by the district mining engineer to be carried at any time in the shaft conveyance;
- (b) "maximum allowable weight" means the maximum weight permitted by this Part to be attached to the rope in service or the maximum weight attached to the rope that the hoist is capable of handling, whichever is the lesser. 1961-62, c. 81, s. 318 (1), *amended*.

- (2) Every drum hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum permissible rope pull for each drum and the maximum permissible suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. 1961-62, c. 81, s. 367 (1), *amended*. Rated loading, drum hoists
- (3) Every friction hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum rated unbalanced load and the maximum rated suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. *New*. Rated loading, friction hoists
- (4) No alterations designed to increase the hoisting capacity shall be made to a hoist unless approval is given by its manufacturer or an independent person approved by the chief engineer. 1961-62, c. 81, s. 367 (2), *amended*. Approval for increased capacity
- (5) Except as provided in clause *b* of subsection 1, the maximum allowable load to be lowered or raised on the shaft conveyance of a drum hoist means the maximum allowable weight at the end of the rope less the weight of the conveyance. Determination of maximum load on conveyance, drum hoists
- (6) The maximum material-load allowed on the conveyance of a friction hoist shall be determined from the lesser of the following calculations: Idem, friction hoists
1. Maximum allowable suspended load on the hoist, less the weight of the hoisting ropes, less the weight of tail ropes, less the weight of the conveyances and the attachments.
 2. The breaking strength of the rope, divided by the required factor of safety, minus the maximum weight of rope suspended in one compartment, minus the weight of the conveyance and attachments in that compartment; and, where multiple ropes are used, the lowest breaking strength of any rope shall be used for all ropes in load calculations.
 3. The unbalanced load on the hoist as rated by the manufacturer, which shall not be exceeded.

4. The maximum allowable load on any conveyance, which shall not be greater than that for which the conveyance was rated by the manufacturer. 1961-62, c. 81, s. 318 (7), *amended*.

Maximum persons load when conveyance also used for materials

- (7) Where a hoisting rope is used for the lowering or raising of both persons and materials, the weight attached to the rope when the bucket, cage or skip is bearing its authorized load of persons shall not exceed 85 per cent of the maximum allowable weight when the rope is in use for other purposes, and for both drum and friction hoists the maximum load of persons shall be determined as follows:

0.85 (maximum material load plus the weight of the conveyance) minus the weight of the conveyance. 1961-62, c. 81, s. 318, (3, *part*, 4), *amended*.

Certificate respecting maximum loads

- (8) The manager shall obtain from the district mining engineer resident in the district a certificate in writing setting out the maximum loads of persons or materials that may be carried in the shaft conveyance before persons are so carried. 1961-62, c. 81, s. 318 (3), *part*, *amended*.

When certificate issued

- (9) The district mining engineer may issue the certificate referred to in subsection 8 if he is satisfied that the hoisting installation and signalling equipment meet the requirements of this Act. 1961-62, c. 81, s. 318 (5), *amended*.

SHAFT HOISTING PRACTICE

Hoisting by automatic control

- 363.—(1) The hoisting of persons or materials in a mine shaft by automatic control is subject to the approval of the chief engineer.

Idem

- (2) Where a hoist in a mine is being operated by automatic control and no other means of hoisting persons is provided, there shall be available a person qualified to operate the hoist manually when persons are underground. 1961-62, c. 81, s. 303, *amended*.

Lowering and raising material

- 364.—(1) Where steel, timber or other material is being lowered or raised in a shaft conveyance in a mine, it shall be loaded in such a manner as to prevent it from shifting its position, and, if necessary, it shall be secured to the conveyance.

- (2) When such material projects above the sides of the conveyance, it shall be securely fastened to the conveyance or lashed to the hoisting rope in such a manner as not to damage the rope. 1961-62, c. 81, s. 304, *amended*. Long material properly secured
365. Where a crosshead is not used in a vertical shaft or winze in a mine, the compartment in which the bucket works shall be closely lined with sized lumber. 1961-62, c. 81, s. 305, *amended*. Compartment to be lined where crosshead not used
366. In the course of sinking a shaft or winze in a mine, the bucket or skip shall be filled only in such a manner that no piece of loose rock projects above the level of the brim. 1961-62, c. 81, s. 306, *amended*. Level of load in bucket or skip
367. In shaft-sinking operations in a mine, where the hoisting speed exceeds 1,000 feet per minute, persons shall ride in the bucket above the bottom crosshead stop. 1961-62, c. 81, s. 307, *amended*. Hoisting men in buckets
- 368.—(1) During sinking operations in a shaft or winze in a mine, the bucket or skip used for returning persons to the working place following a blasting operation shall not be lowered on the initial trip beyond the point where, owing to the blast, it may be unsafe to go without a careful examination, and in no case shall the point be less than fifty feet above the blasting set or bulkhead. Lowering men after blast
- (2) The bucket or skip shall be lowered from such point only on signal from the persons accompanying it and at such speed as to be fully under control, by signal, of such persons. Idem
- (3) Only sufficient persons shall be carried on such a trip as are required to properly conduct a careful examination of the shaft or winze. 1961-62, c. 81, s. 308, *amended*. Idem
369. In the course of sinking a shaft or winze in a mine, the bucket or skip shall not be lowered directly to the bottom but shall be held at least fifteen feet above the bottom and shall remain there until a separate signal to lower it has been given by an authorized person. 1961-62, c. 81, s. 309, *amended*. Bucket or skip not to be lowered directly to face
370. No bucket shall be allowed to leave the top or bottom of a shaft or winze in a mine until the person in charge of it has steadied it or caused it to be steadied. 1961-62, c. 81, s. 310, *amended*. Bucket to be steadied

Protection
from
dumping

371.—(1) In the course of sinking a shaft or winze in a mine, adequate provision shall be made and maintained to ensure the impossibility of the bucket or skip being dumped while the dumping doors are open and means shall be applied to prevent spillage from falling into the shaft or winze.

Door
to cover
sinking
compartment

(2) A door or doors to cover the sinking compartments shall be provided and maintained at the collar or other point of service of every shaft or winze in a mine while sinking is in progress.

Design
to be
approved

(3) The design of the things required under subsections 1 and 2 shall be submitted for the approval of the district electrical-mechanical engineer before such things are installed.

Doors to be
closed

(4) The door or doors referred to in subsection 2 that are at the point of loading shall be kept closed when tools or material are being loaded into or unloaded from the bucket or skip, except when the bucket or skip is unloaded by dumping arrangements as provided for in subsection 1.

Idem

(5) The door or doors referred to in subsection 2 shall be closed when persons are loaded or unloaded, except where a safety crosshead fills the compartment at the collar or other point of service. 1961-62, c. 81, s. 311, *amended*.

Warning of
obstruction

(6) Any doors or other shaft fixture which when moved into the travel area of a shaft compartment would interfere with free passage of the conveyance shall be so equipped that their position is indicated to the hoistmen by signal lights. *New*.

Cage for
handling
men

372. Except during sinking operations, whenever a mine shaft or winze exceeds 300 feet in vertical depth, a suitable cage or skip constructed as required by sections 323 and 324 shall be provided for lowering or raising men in the shaft or winze. 1961-62, c. 81, s. 312, *amended*.

Cage doors
to be closed

373.—(1) No person shall travel or be permitted to travel in a cage at any time, except during shaft inspection, unless the doors of the cage are securely closed. 1961-62, c. 81, s. 313 (1).

Idem

(2) The doors of a cage shall not be opened until a full stop has been made at the point or station signalled except,

- (a) during trips of inspection; and
- (b) as permitted by subsection 3. 1961-62, c. 81, s. 313 (2), *part, amended*.
- (3) In the case of an inadvertent stop at a point in the shaft or winze other than a station, the cage doors may be opened and then persons may leave the cage only on the instructions of an authorized person outside the cage. 1961-62, c. 81, s. 313 (2), *part, amended*. ^{Idem}
- 374.—(1) Where chairs are used for the purpose of landing a shaft conveyance at a point in a shaft or winze, except when hoisting in balance from that point, the chairs shall not be put into operation unless the proper chairing signal has been given to the hoistman. ^{Operation of chairs}
- (2) Chairs shall not be used when persons are in or on a shaft conveyance. 1961-62, c. 81, s. 314, *amended*. ^{Idem}
- 375.—(1) Except as provided for in clause *c* of section 376, no person shall travel or be permitted to travel in a bucket, cage or skip operated by a hoist that is being simultaneously used for the hoisting of mineral or material. ^{Hoisting persons and material simultaneously}
- (2) No person shall be lowered or raised or permit himself to be lowered or raised in a shaft or other underground opening except in an approved raise climber, or a scaling platform, or in an approved hoisting conveyance as provided for in section 376, but this prohibition does not apply where persons are lowered or raised by hand or by means approved by the district electrical-mechanical engineer for use in construction, maintenance or repair work. 1961-62, c. 81, s. 315, *amended*. ^{Persons only in approved conveyances}
376. No person shall be lowered or raised or allow himself to be lowered or raised in a shaft, winze, or other underground opening of a mine, ^{When persons not to be hoisted}
- (a) in a bucket or skip, except that persons employed in shaft sinking may ascend and descend to and from the sinking deck or other place of safety and the persons employed in shaft inspection and maintenance may be lowered or raised in the shaft by means of such conveyance;

- (b) in a cage or skip that does not meet the requirements of sections 324 and 326, except as provided for in clause *a* of this section or section 325;
- (c) in a cage, skip or bucket that is loaded with explosives or blasting agents, steel, timber or other material or equipment, except where such person is authorized to handle such material in a cage, skip or bucket and the materials are adequately secured as required by section 364, but nothing in this clause prohibits persons from carrying personal hand tools or equipment approved by the district mining engineer in a shaft conveyance if such tools or equipment are properly protected with guards and the conveyance is not overcrowded;
- (d) in any shaft conveyance, except during shaft sinking operations or shaft inspection and maintenance operations, except where a person authorized to give signals is in charge of the shaft conveyance. 1961-62, c. 81, s. 316, *amended*.

Use of
conveyance
if drum
unclutched

377. Except in the course of sinking a shaft in a mine, no person shall enter or be allowed to enter a shaft conveyance or work upon or under a shaft conveyance when the corresponding drum of the hoist is unclutched, unless the conveyance is first secured in position by chairing or blocking. 1961-62, c. 81, s. 317, *amended*.

Permission
necessary
to handle
men in skip
or bucket

378. Permission shall be obtained from the chief engineer before a skip or bucket is used for lowering or raising persons in a shaft or winze of a mine, except during sinking, inspection or maintenance operations. 1961-62, c. 81, s. 338 (2), *amended*.

Use of
shaft
buckets

379. Where a bucket is used in a shaft or winze in a mine for other than sinking purposes,
- (a) a set of doors as required by subsection 2 of section 371 shall be installed at the collar and every point of service of the shaft or winze;
 - (b) a suitable landing device shall be used at every working level when the bucket is being loaded or unloaded at that level; and

- (c) simultaneous operations shall not be carried on at more than one level until the style of structure and method of operation of any such device installed at intermediate levels have been submitted to and have received the approval of the district mining engineer. 1961-62, c. 81, s. 270, *amended*.

CONVEYANCE NOTICES AND DISCIPLINE

- 380.—(1) A notice showing clearly the number of persons ^{Notice to be posted} allowed to be carried in and the weight of materials allowed to be loaded on the conveyance, as referred to in subsection 6 of section 362, shall be posted and maintained at the collar of the shaft or winze.
- (2) The person authorized to give signals is responsible ^{Responsibility} for the observance of such notice. 1961-62, c. 81, s. 319, *amended*.
- 381.—(1) When persons are being lowered or raised in a ^{Lamps} cage or skip, no person, other than the cagetender or skiptender, shall have a burning open-flame lamp of any kind, except that, for shaft inspection or similar purposes, a sufficient number of lighted lamps shall be permitted.
- (2) When persons are being lowered or raised in a cage or skip a proper discipline of the persons riding in the ^{Discipline to be maintained} cage or skip shall be maintained.
- (3) No person shall obstruct the enforcement of the re- ^{Obstruction prohibited}quirements of subsection 1 of section 380 or this section. 1961-62, c. 81, s. 320, *amended*.

SIGNALS

382. Every working shaft in a mine shall be provided with ^{Signal systems} a suitable means of communicating by distinct and definite signals to the hoist room from the bottom of the shaft, from every working level, from the collar and from every landing deck. 1961-62, c. 81, s. 321, *amended*.
383. A separate, audible signal system shall be installed ^{Separate system for each compartment} for the control of each hoisting conveyance operated from a single hoist in a mine, and there shall be a sufficient difference in the signals to the hoistman so that they are easily distinguishable. 1961-62, c. 81, s. 322, *amended*.

Return
signals

384.—(1) Where an electrical signal system is installed in a mine, the hoistman shall return the signal to the person giving the signal when persons are about to be lowered or raised. 1961-62, c. 81, s. 323, *amended*.

Idem,
multi-deck
staging

(2) Where multi-deck staging is being used for shaft-sinking in a mine, an audible or visible return signal system shall be installed and used. *New*.

Special
devices

385. No device for signalling to or communicating with the hoistman shall be installed or operated in or on any shaft conveyance in a mine without the written permission of the chief engineer. 1961-62, c. 81, s. 324, *amended*.

Cage call
system

386. No cage call system communicating with the hoist-room shall be installed or used at a shaft or winze in a mine. 1961-62, c. 81, s. 325, *amended*.

Code of
signals

387.—(1) The following code of signals shall be used at every mine and a copy of such code shall be printed and kept posted in every hoist room and at every level or other recognized landing place in every working shaft or winze:

1 bell. . . . Stop immediately — if in motion
(Executive Signal).

1 bell. . . . Hoist (Executive Signal).

2 bells. . . . Lower (Executive Signal).

3 bells. . . . Men travelling in hoisting conveyance (Cautionary Signal). This signal shall be given by the conveyance tender at all levels before any person, including the conveyance tender, is permitted to enter or leave the conveyance. Where a stop exceeds one minute, the 3-bell signal shall precede the next destination signal. Where a return-bell signal system is installed, the hoistman shall return the 3-bell signal before any person is permitted to enter or leave the conveyance.

4 bells. . . . Blasting Signal. The hoistman shall answer by raising the bucket, cage or skip a few feet and letting it back slowly. Following a 4-bell signal, only

a 1-bell signal shall be required to signal for hoisting persons away from a blast and the hoistman shall remain at the controls until the act of hoisting has been completed.

5 bells . . . Release Signal. The hoistman may act at his own discretion to perform any movements, or series of movements, involving the conveyance or conveyances designated by the destination signals referred to in section 388. Where a return-signal system is installed, the hoistman shall return the signals and may then act at his own discretion. On the completion of the necessary movements, he shall not move the hoist again until he has received a new signal.

9 bells . . . Danger Signal (Special Cautionary). To be given only in case of fire or other danger. The signal for the level at which the danger exists should be given following the giving of the danger signal. This signal to be given only on the call system or voice communication system except in shaft sinking and maintenance. 1961-62, c. 81, s. 326 (1), *amended*.

(2) The following method and order shall be observed in giving signals: Method and order of signals

1. Strokes on the bell shall be made at regular intervals.
2. Signals shall be given in the following order: 1st, Cautionary Signals; 2nd, Destination Signals; 3rd, Executive Signals. 1961-62, c. 81, s. 326 (2).

388.—(1) At every mine, other signals, termed destination signals, in conjunction with the code set forth in subsection 1 of section 387 shall be used to designate all regular stopping points. 1961-62, c. 81, s. 327 (1), *amended*. Special signals

(2) Special signals shall be used to designate all special hoisting movements. 1961-62, c. 81, s. 327 (2). Idem

Idem

- (3) Special signals shall be easily distinguishable from the code set forth in subsection 1 of section 387 and shall not interfere with it in any way and shall follow the Department's standard mine signal code, and any deviation from the latter shall be approved by the chief engineer.

Idem

- (4) Such destination signals and other special signals approved for use at any mine and an adequate description of their application to the movements required shall be posted at every hoist, at the top of the shaft or winze and at every working level of the shaft or winze. 1961-62, c. 81, s. 327, *amended*.

Hoistman
not to move
conveyances

- 389.—(1) Except as provided in subsection 2, the hoistman shall not move the hoisting conveyance within a period of ten seconds after receiving a signal designating a movement at any time that persons are carried. 1961-62, c. 81, s. 328 (1), *amended*.

Where
waiting
period not
required

- (2) The waiting period mentioned in subsection 1 is not required where throughout the shaft or winze the executive signal given only after the hoisting conveyance doors and the shaft gates have been completely closed and the person giving the signal is inside the conveyance or in the shaft station or other recognized landing place.

If unable
to act
within one
minute

- (3) In case the hoistman is unable to act within one minute of the time he has received any complete signal, he shall not move the hoisting conveyance until he has again received another complete signal. 1961-62, c. 81, s. 328 (2), *amended*.

3-bell
signal

- 390.—(1) After a hoistman has received a 3-bell signal, he shall remain at the hoist controls until he has received the signal designating the movement required and has completed that movement. 1961-62, c. 81, s. 329 (1).

Idem

- (2) After the hoistman has commenced the movement, he shall complete it without interruption, unless he receives a stop signal or in case of emergency. 1961-62, c. 81, s. 329 (2), *amended*.

Hoistman
to remain
at controls

- 391.—(1) Except when the hoist is operating under automatic control, the hoistman shall remain at the hoist controls at all times the hoist is in motion. 1961-62, c. 81, s. 330, *amended*.

- (2) Before a hoistman leaves the hoist controls, he shall ^{Idem} ensure that the brakes are fully set and that there will be no inadvertent motion of the hoist drums. *New.*
392. Except in case of emergency, no person shall speak ^{Talking to hoistman} to the hoistman while the hoist is in motion, and a sign to this effect plainly visible to any person approaching the hoist controls shall be kept posted at all times. 1961-62, c. 81, s. 331, *amended.*
- 393.—(1) Except as provided in subsection 2, the hoist- ^{Signal required} man shall not move the hoisting conveyance until he has received a proper signal. 1961-62, c. 81, s. 332, *part, amended.*
- (2) In the event of an inadvertent stop at some point in ^{Exception} the shaft or winze other than at a station from which a signal may be given, the hoistman may move the conveyance when he has assured himself that the hoist controls are in proper working order and, when lowering or raising persons he has received instructions from an authorized person. 1961-62, c. 81, s. 332, *part, amended.*
- 394.—(1) No person, unless he is authorized so to do, ^{Only authorized persons to give signal} shall give any signal for moving or stopping a bucket, cage or skip in a mine.
- (2) No unauthorized person shall give any signal or in ^{Idem} any way interfere with the hoist signalling arrangements.
- (3) No person, unless he is authorized so to do, shall ^{Only authorized persons may operate hoist} operate any equipment for controlling the movement of the hoist or interfere with the equipment. 1961-62, c. 81, s. 333, *amended.*
- 395.—(1) A system shall be installed in any active shaft or winze to provide voice communication between the ^{Voice communication} collar and regular landing places. 1961-62, c. 81, s. 334 (1) *amended.*
- (2) Such installations shall be provided at suitable ^{Idem} intervals. *New.*
396. No signal shall be given unless the bucket, cage or ^{Position of conveyance} skip is at the level from which the signal is to be given. 1961-62, c. 81, s. 335.

HOISTING PROCEDURE

Hoisting
after
stoppages

397.—(1) If at the commencement of a shift there has been a stoppage of hoisting in a shaft for a period exceeding two hours duration, no regular hoisting shall be done until the shaft conveyance has made one complete trip through the working part of the shaft or, where shaft repairs have been made, a return trip of the shaft conveyance has been made through and below the affected part of the shaft.

Record of
stoppages

(2) The hoistman shall record all such stoppages and trips in the Hoistman's Log Book. 1961-62, c. 81, s. 344, *amended*.

Auxiliary
overwind

398. Where a hoist is equipped with an auxiliary overwind device for preventing persons from being hoisted to the dumping position in skips or in skips of skip-cage assemblies as required in section 533, the hoistman shall place the device in operation or assure himself that it is in operation at all times that persons are in or on the conveyance. 1961-62, c. 81, s. 345, *amended*.

Obstruc-
tions

399. Where obstructions such as those referred to in section 527 may exist, the hoistman shall not lower or raise the shaft conveyance without proper authority. 1961-62, c. 81, s. 346, *amended*.

Testing
overwind
devices

400. All overwind and underwind devices shall be tested at least once during every twenty-four hours of operation and a record of the test shall be posted immediately in the Hoistman's Log Book. 1961-62, c. 81, s. 347, *amended*.

Brakes
to be tested

401.—(1) The operator of a hoist shall, after going on shift and before a shaft conveyance is lowered or raised, assure himself that the brake or brakes are in proper condition to hold the loads suspended on the corresponding drum or drums by testing the brakes of the drums against the normal starting power of the engine or, in the case of an electric hoist, against the normal starting current.

Drum
not to be
unclutched

(2) The operator of a hoist shall not unclutch a drum of the hoist until the test mentioned in subsection 1 has been made. 1961-62, c. 81, s. 348, *amended*.

Friction
clutches

402.—(1) Where a hoist is fitted with a friction clutch, the operator shall, after going on shift and before a conveyance is lowered or raised, test the holding power

of the clutch, the brake of the corresponding drum being kept on and the brake of the other drum being kept off.

- (2) In the case of a steam or air hoist, the test mentioned ^{Idem} in subsection 1 shall be made against the normal starting power of the engine and, in the case of an electric hoist, against the normal starting current. 1961-62, c. 81, s. 349, *amended*.

- 403.—(1) When the drum of a hoist is unclutched, the brake of the drum shall be used only for the purpose of maintaining the drum in a stationary position, and no lowering shall be done from an unclutched drum. ^{Use of brake when drum unclutched} 1961-62, c. 81, s. 350.
- (2) Before commencing unclutching operations, the hoistman shall ensure that the brakes have been applied on both hoist drums. ^{Unclutching procedure} *New*.
- (3) When persons are in or on a shaft conveyance, the corresponding drum of the hoist shall be kept ^{When clutch to be kept in} clutched in. 1961-62, c. 81, s. 351, *amended*.

HOISTMAN'S LOG BOOK

- 404.—(1) At every shaft or winze hoist, there shall be kept a Hoistman's Log Book in which the following shall be recorded: ^{Hoistman's Log Book}
1. A report of the working condition of the hoist, including the brakes, clutches, interlocking devices between the brake and clutch, depth indicators and all other devices and fittings pertaining to the safe operation of the hoist.
 2. A report of the working condition of the signalling apparatus and a notation of any signals received by the hoistman, the accuracy of which he has questioned.
 3. Any special instructions received involving the safety of persons, such entry to be signed by the hoistman and by the person issuing the instructions.
 4. A report of the tests of the overwind and underwind devices.

5. Where the required tests of the overwind and underwind devices are conducted by a hoistman operating on another shift, the hoistman assuming duty shall note over his signature that he has examined the entry in the log book of the hoistman who performed the tests.

6. A report of all abnormal circumstances in connection with the operation of the hoist or attachments thereto and such abnormal conditions as have come to the hoistman's knowledge in connection with the hoisting operations in the shaft or winze.

7. A report of all trial trips referred to in sections 359 and 397.

- | | |
|------|---|
| Idem | (2) A notification to the hoistman on a succeeding period of duty of any special circumstances or matter affecting the continued operation of the hoist or the safety of persons in the shaft or winze shall be made in the Hoistman's Log Book. 1961-62, c. 81, s. 352 (1, 2). |
| Idem | (3) All such entries shall be read and countersigned by the hoistman assuming duty for the succeeding period. 1961-62, c. 81, s. 352 (3), <i>amended</i> . |
| Idem | (4) Such entries as are required by this section shall be made and signed by every hoistman for his period of duty on a shaft or winze hoist and the time and duration of his period of duty shall also be noted, and such entries as have been made during the preceding twenty-four hours shall be read and countersigned each day by the master mechanic or other authorized person. 1961-62, c. 81, s. 352 (4). |

RAISE CLIMBERS

- | | |
|----------------------|--|
| Brakes | 405.—(1) Raise climbers shall be fitted with more than one means of braking, each capable of stopping the climber and holding it in place. |
| Testing of
brakes | (2) The operator of a raise climber shall ensure at the beginning of his shift that the brakes are in safe working condition. |
| Mainten-
ance | (3) Raise climbers shall be maintained in safe operating condition. |
| Load
capacity | (4) The rated load capacity of a raise climber as certified by the manufacturer shall not be exceeded. |

- (5) Where raise climbers are used pursuant to section 265 ^{Log book} or subsection 2 of section 375, an approved log book shall be maintained.
- (6) A record of inspections, maintenance and repairs shall ^{Record kept} be maintained in the log book.
- (7) The log book shall be available to the district engineer ^{Availability to engineer} at all times. 1961-62, c. 81, s. 387, *amended*.

PITS AND QUARRIES

- 406.—(1) In workings of clay, sand, gravel or other types ^{Under-mining prohibited} of unconsolidated material, the method of removing material by undermining shall not be used. 1961-62, c. 81, s. 411 (1).
- (2) Where mechanical equipment is not used, no working ^{Height of working face} face in workings of clay, sand, gravel or other types of unconsolidated material shall have a vertical height of more than ten feet unless the material is at a suitable angle to ensure safety. 1961-62, c. 81, s. 411 (2), *amended*.
- (3) Where the thickness of the material exceeds ten ^{Terraces} feet in vertical depth, the work shall be done in terraces or at a suitable angle to ensure safety.
- (4) Where mechanical equipment is used in loading ^{Use of mechanical equipment} clay, sand, gravel or any other type of unconsolidated material, unless the material is at a suitable angle of repose, no working place shall have a vertical height of more than five feet above the top of the boom or the bottom of the bucket raised to its highest operating position. 1961-62, c. 81, s. 411 (3, 4).
- (5) No internal combustion engine shall be installed or ^{Use of internal combustion engines} operated in any pit or quarry unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate therein to a degree that is likely to endanger the safety of any person. *New*.
407. Unless permission in writing is first obtained from ^{Height of face in consolidated material} the chief engineer, all open-cut (cast) operations (workings) in consolidated material over sixty-five feet in depth shall be worked in benches not more than sixty-five feet high, and due precautions shall be taken to maintain the walls, benches and broken material in a safe working condition, and no working face shall be advanced by undercutting, except where a tunnelling method is used. 1961-62, c. 81, s. 412, *amended*.

- Fencing pits and quarries 408. Every pit or quarry dangerous by reason of its depth shall be securely fenced or otherwise protected against inadvertent access. 1961-62, c. 81, s. 413.
- Stripping overburden 409.—(1) In all open-pit workings, all unconsolidated materials, such as clay, earth, sand, gravel, and loose rock, lying within six feet of the rim of the pit or quarry, shall be removed.
- Idem (2) Beyond this strip, all overburden shall be sloped to an angle less than its natural angle of repose. 1961-62, c. 81, s. 414.
- Precautions when stockpiling 410.—(1) When dumping material from a vehicle to a stockpile, due precautions shall be taken to keep the vehicle at a safe distance from the edge. 1961-62, c. 81, s. 415.
- Exits from tunnels under stockpiles (2) Two exits shall be provided from a tunnel under a stockpile. *New.*
- Property boundaries, unconsolidated material 411.—(1) Unless the adjoining owners agree to dispense therewith, in sand, clay or gravel or other natural unconsolidated material, excavation operations shall not be carried on within a distance from the property boundary of half the height of the total pit face, and material that sloughs from within this distance shall not be removed. 1961-62, c. 81, s. 416 (1).
- Idem, rock quarries (2) Unless the adjoining owners agree to dispense therewith, no quarrying operation shall be carried on in a rock quarry within a distance of fifteen feet from the property boundary.
- Idem (3) Subject to subsection 2, where there is overburden in a rock quarry, the natural slope of the overburden shall be allowed for from the property boundary in addition to the six feet required by subsection 1 of section 409. 1961-62, c. 81, s. 416 (2, 3), *amended.*
- Examination of wall 412.—(1) No person shall be permitted to work near a pit or quarry wall until the wall has been examined by the supervisor in charge of the crew.
- Idem (2) If the wall is found unsafe, the supervisor shall have all hazards removed before permitting any other work. 1961-62, c. 81, s. 417, *amended.*
- Inspection of derrick guy wires 413. Derrick guy wires shall be regularly inspected and maintained. 1961-62, c. 81, s. 418.
- Safety belts and safety harnesses 414.—(1) Every person engaged in work on the wall of a pit or quarry at such operations as barring loose

material, scaling or cleaning, shall wear continually a safety belt or safety harness.

- (2) The rope of such belt or harness shall be securely ^{Snubbing, etc.} snubbed above the working place or the rope may be held taut by one or more persons. 1961-62, c. 81, s. 419, *amended*.
415. No person shall be lowered or raised or allow himself to be lowered or raised by means of a hoist or derrick at a pit or quarry unless permission is first obtained in writing from the chief engineer. 1961-62, c. 81, s. 420, *amended*. ^{Hoisting of persons prohibited}
416. Where a load is being hoisted or lowered by means of a hoist or derrick at a pit or quarry, a signalman, where required, shall notify all persons in the vicinity to retire to a place of safety until the load has cleared the danger zone. 1961-62, c. 81, s. 421, *amended*. ^{Signalman to clear area}
- 417.—(1) An effective block, automatic derail or safety switch shall be provided at the top of each inclined place at a pit or quarry to prevent cars from accidentally running down. ^{Deraill at top of incline}
- (2) Such installation, however, is not required where the skip or car remains attached to the hoisting rope. 1961-62, c. 81, s. 422, *amended*. ^{Exception}
418. At all rock quarries and open pits, a record of each primary blast, signed by the person in charge of the blast, shall be kept and the following information recorded: ^{Record of primary blasts}
1. Date, time and location of the blast.
 2. Burden, spacing, depth and number of holes blasted.
 3. Weight of explosives or blasting agents, footage of top stemming and firing delay detonators used in respect of each hole.
 4. Weight of explosives or blasting agents used per estimated ton broken. 1961-62, c. 81, s. 423, *amended*.
419. Unless the movement of a hoisting conveyance at a pit or quarry is visible to the hoistman at all times, a suitable signal system shall be installed and maintained, and suitable signals, approved by the district mining engineer, shall be used. 1961-62, c. 81, s. 424, *amended*. ^{Hoisting signals}

Travelling
ways

420.—(1) At every pit or quarry, there shall be provided and maintained in good working condition a suitable travelling way leading from the working level of the pit or quarry to the surface. 1961-62, c. 81, s. 425 (1), *amended*.

Where
stairways
or ladders
mandatory

(2) Where the travelling way is inclined at more than 30 degrees and less than 50 degrees to the horizontal, stairways or ladders shall be provided.

Hand-rails
on stairways

(3) All stairways shall be equipped with substantial and suitably placed hand-rails. 1961-62, c. 81, s. 425 (2, 3).

Where
ladders
mandatory

(4) Where the travelling way is inclined at more than 50 degrees to the horizontal, ladders shall be provided. 1961-62, c. 81, s. 425 (4), *amended*.

Platforms

(5) Substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and at all places where the ladders are off-set.

Maximum
inclination
of ladders

(6) Except for approved access ladders to equipment, no ladder shall be installed at an inclination of more than 70 degrees to the horizontal. 1961-62, c. 81, s. 425 (5, 6).

STEAM, COMPRESSED AIR

Steam
boilers

421.—(1) Every steam boiler used for generating steam in or about a mine, whether separate or one of a range,

(a) shall have attached to it a proper safety-valve, steam-gauge and water-gauge to show respectively the pressure of steam and the height of water in each boiler; and

(b) shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer. 1961-62, c. 81, s. 452 (1), *amended*.

Certificate
to be
posted

(2) The certificate of inspection shall be kept posted in the boiler room at all times. 1961-62, c. 81, s. 452 (2).

Mainten-
ance

422. Every such boiler, safety-valve, steam-gauge and water-gauge shall be maintained in proper working condition. 1961-62, c. 81, s. 453.

- 423.—(1) Every air receiver installed at the surface of a mine and those installed with an air compressor underground shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer. Air receivers and compressors
- (2) The certificate of inspection shall be kept posted in the compressor room at all times. Certificate to be posted
- (3) All intercoolers, aftercoolers, inlet and discharge valves on stationary compressors in operation shall be examined at least once in every twelve months and shall be cleaned when necessary. 1961-62, c. 81, s. 454 (1-3). Examination and maintenance
- (4) A temperature-indicating device shall be installed on the high pressure discharge of each compressor and the normal operating temperature of the compressor shall be indicated by a red mark on the scale of the device. 1961-62, c. 81, s. 454 (4, 5), *amended*. Temperature-indicating device
- (5) The temperature shall be observed at regular intervals during the shift and shall be recorded in the compressor log book. Recording of temperature
- (6) Subsections 3, 4 and 5 do not apply to, Exception
- (a) a compressor discharging to atmosphere;
 - (b) a compressor installation with a prime-mover having a Therm-hour rating of 1.145 or less;
 - (c) a compressor plant used for compressing air to a pressure of more than 15 pounds per square inch where the total Therm-hour rating of the prime-mover or movers is 1.908 or less; or
 - (d) a compressor where the cylinders are not lubricated with oil. 1961-62, c. 81, s. 454 (6, 7), *amended*.
- (7) The air receivers mentioned in subsection 1 shall be examined at least once in every twelve months and shall be cleaned when necessary. Examination of air receivers
- (8) A book shall be kept in which shall be recorded the date of every examination and cleaning under sub- Record of examinations

sections 3 and 7 and a note shall be made as to the condition of the appliance examined or cleaned. 1961-62, c. 81, s. 454 (8, 9).

PROVISIONS GOVERNING THE USE OF ELECTRICITY

Interpre-
tation

424.—(1) In this section and in sections 425 to 563,

1. "accessible", as applied to equipment, means permitting close approach due to not being guarded by locked doors, elevation or other effective means;
2. "armoured cable" means a cable provided with an outer covering, fabricated from a metal other than lead, which forms an integral part of the assembly of the cable and is designed primarily to afford mechanical protection;
3. "authorized person" means,
 - i. a qualified person who, because of his duties or occupation, is delegated to approach or handle electrical equipment, or
 - ii. any other person who, having been warned of the hazards involved, has been instructed or authorized to approach or handle electrical equipment by some person having authority to give the instructions or authorization;
4. "branch circuit" means the part of a circuit that extends beyond the final over-current devices on the circuit;
5. "circuit" means a path through which electric current can flow;
6. "circuit-breaker" means an electro-mechanical device designed to open, under both overload and short-circuit conditions, a current-carrying circuit without injury to the device;
7. "conductor" means a body so constructed from conducting material that it may be used as a carrier of electric current;

8. "contactor" means a device, operated other than by hand, for repeatedly establishing and interrupting an electric power circuit;
9. "disconnecting means" means a device, group of devices or other means whereby the conductors of a circuit can be disconnected from their source of supply;
10. "electrical equipment" means any apparatus, appliance, device, instrument, fitting, fixture, machinery, material or thing used in or for, or capable of being used in or for, the generation, transformation, transmission, distribution, supply or utilization of electric power or energy, and, without restricting the generality of the foregoing, includes any assemblage or combination of materials or things which is used, or is capable of being used or adapted, to serve or perform any particular purpose or function when connected to an electrical installation, notwithstanding that any such materials or things may be mechanical, metallic or non-electric in origin;
11. "feeder" means a conductor, or group of conductors, which transmits electrical energy from a service supply, transformer, switchboard, distribution centre, generator or other source of supply to branch circuit overcurrent devices;
12. "ground" means a connection to earth obtained by a ground electrode;
13. "ground electrode" means a buried metallic water-piping system or metal object or device buried in or driven into the ground so as to make intimate contact therewith and to which a grounding conductor is electrically and mechanically connected;
14. "grounded" means connected effectively with the general mass of the earth through a grounding system having a current-carrying capacity sufficient at all times, under the most severe conditions that are liable to arise in practice, to prevent a current in the grounding conductor from causing a harmful voltage to exist,

- i. between the grounded conductors and neighbouring exposed conducting surfaces that are in good contact with the earth, or
 - ii. between the grounded conductors and neighbouring surfaces of the earth itself;
- 15. "grounding conductor" means a path of suitable metal specially arranged as a means whereby electrical equipment is electrically connected to a ground electrode;
- 16. "grounding system" means all conductors, clamps, ground clips, ground plates or pipes and ground electrodes by means of which the electrical installation is grounded;
- 17. "guarded" means covered, shielded, fenced, enclosed or otherwise protected by means of suitable covers, or casings, barriers, rails or screens, mats or platforms, to remove the likelihood of dangerous contact or approach by persons or objects;
- 18. "isolating means" means a device, group of devices or other means intended for isolating an electric circuit from its source of power and intended to be operated only after the circuit has been opened by some other means;
- 19. "mobile", as applied to electrical equipment, means the equipment is specifically designed not to be used in a fixed position;
- 20. "overcurrent device" means any device capable of automatically opening an electrical circuit both under pre-determined overload and short-circuit conditions either by fusing of metal or by electro-mechanical means;
- 21. "overload device" means a device affording protection from excess current but not necessarily short-circuit protection, and capable of automatically opening an electric circuit either by the fusing of metal or by electro-mechanical means;
- 22. "qualified person" means a person familiar with the construction and operation of electrical equipment and the hazards involved;

23. "switch" means a device for making, breaking or changing connections in a circuit, and
 - i. "general use switch" means a switch that is intended for use in general distribution and branch circuits, is rated in amperes and is capable of interrupting its rated current at rated voltage, and
 - ii. "motor circuit switch" means a switch, rated in horsepower, capable of interrupting the maximum operating overload current of a motor of the same horsepower at the rated voltage;
24. "switchboard" means a panel or assembly of panels on which are mounted any combination of switching, measuring, control and protective devices, buses and connections, designed with a view to successfully carrying and rupturing the maximum fault current encountered when controlling incoming and outgoing feeders;
25. "utilization equipment" means equipment, devices and connected wiring that utilize electrical energy for mechanical, chemical, lighting, testing or similar purposes and are not a part of the supply equipment, supply lines or communication lines;
26. "visible break", where applied to a disconnecting means, means a switch or device wherein the separation between all members of the movable and the fixed current-carrying parts may be readily determined by visual inspection;
27. "voltage" or "volts" means the highest effective difference of potential between the conductors of the circuit concerned;
28. "voltage to ground" means,
 - i. in grounded circuits, the highest effective difference of potential between any wire of the circuit and ground,
 - ii. in ungrounded circuits, the highest effective difference of potential existing in the circuit;

29. "wire gauge" means the standard known as A.W.G. (American Wire Gauge) or B. & S. (Brown and Sharpe) wire gauge. 1961-62, c. 81, s. 455.

Applica-
tion of
ss. 425-563

(2) Except where a contrary intent is provided, sections 425 to 563 apply to mines, on surface and underground, and to plants. *New*.

GENERAL

Disconnec-
tion when
abandoned

425. In case of the abandonment of a mine or plant, the owner, agent or manager shall cause the station or stations supplying power to and being the property of the mine or plant to be disconnected from the power source and within fourteen days shall notify the chief engineer in writing that the disconnection has been made. 1961-62, c. 81, s. 456, *amended*.

Require-
ments to be
observed

426.—(1) Electrical equipment shall be designed, installed and maintained in compliance with the requirements of this Part. 1961-62, c. 81, s. 457.

Notification
required

(2) The district electrical-mechanical engineer shall be notified of any proposed,

(a) major electrical installation;

(b) radio-frequency transmitter installation; or

(c) major extension to existing installations. *New*.

Accepted
standard

427. The edition that is current from time to time of the Canadian Electrical Code, Part I, shall be accepted as good practice in the installation of electrical equipment except where it conflicts with the provisions of this Part in which case the provisions of this Part prevail. 1961-62, c. 81, s. 458, *amended*.

Hazard free

428. All electrical equipment shall be of such construction and so installed and maintained as to reduce fire hazard injury to persons as far as is practicable. 1961-62, c. 81, s. 459, *amended*.

Identifica-
tion of
equipment

429. All electrical equipment shall be suitably identified where necessary for safety. 1961-62, c. 81, s. 460.

Nameplate
required

430. Electrical equipment shall show a plate bearing the maker's name and all other ratings, such as horse-power, voltage or current, necessary to prove its suitability. 1961-62, c. 81, s. 461.

- 431.—(1) Where electrical apparatus is used at a mine or plant, it shall be in the charge of an authorized person who shall be qualified by experience to handle such apparatus. 1961-62, c. 81, s. 462 (1), *amended*. Competent person in charge
- (2) Every person operating or having charge of electrical apparatus shall have been instructed in his duty and shall be competent to perform the work that he is set to do. Idem
- (3) Repairs, extensions and changes to existing electrical installations shall be made only by qualified persons. 1961-62, c. 81, s. 462 (2, 3). Idem
432. Temporary wiring and equipment that do not comply with this Part may be used in an emergency, but only when under competent supervision or protected by suitable barriers or warning signs while it or neighbouring wiring is alive and accessible to unauthorized persons, and such temporary installations are permissible only for the period of the emergency. 1961-62, c. 81, s. 463, *amended*. Temporary installations
- 433.—(1) Defective equipment shall be put in good order or permanently disconnected. Defective equipment
- (2) Defective wiring shall be repaired or removed. 1961-62, c. 81, s. 464. Defective wiring
- 434.—(1) No repairs or alterations shall be carried out on live equipment except where complete disconnection of the equipment is not practicable. Repairs or alterations to electrical equipment
- (2) When repairs or alterations are being made, whether the equipment is alive or dead, all necessary precautions shall be taken to ensure that the work may be done safely. Idem
- (3) In places where explosive or highly flammable materials or gases are present, or in wet locations, repairs or alterations shall not be made on live equipment. 1961-62, c. 81, s. 465, *amended*. Idem
- 435.—(1) All switches controlling apparatus shall be locked or plainly tagged in the open position to prevent the inadvertent closing thereof while work is being done on the apparatus. Locking or tagging switches
- (2) Notices placed on electrical equipment shall be of non-conducting materials. 1961-62, c. 81, s. 466. Idem

Fire-extinguishing appliances

436.—(1) Where installed electrical apparatus presents a fire hazard, each room or space shall be provided with an adequate approved fire-extinguishing appliance, conveniently located and conspicuously marked.

Idem

(2) Any fire-extinguishing appliance that has not been approved for use on live parts shall not be placed in a room containing electrical apparatus or exposed lines unless a sign is mounted at the appliance warning against its use on electrical fires. 1961-62, c. 81, s. 467.

GROUNDING

Protection from mechanical injury

437. Grounding conductors shall have adequate protection where exposed to mechanical injury. 1961-62, c. 81, s. 468.

Circuits to be grounded

438.—(1) One conductor of all circuits not over 150 volts shall be grounded if exposed to leakage from higher voltage circuits either through overhead construction or through transformers having a primary voltage exceeding 750 volts, except where such circuits form part of a control circuit or signalling system the grounding of which would affect the reliability of service.

Idem

(2) Three-wire single-phase circuits not exceeding 300 volts between outer conductors shall have the neutral grounded.

Idem

(3) One conductor of the secondary circuits of all instrument transformers shall be grounded unless the circuits are installed and guarded as required for the high-voltage circuits of the transformers. 1961-62, c. 81, s. 469.

Size of circuit grounding conductor

439.—(1) For grounding a.c. circuits, the grounding conductors shall have adequate current-carrying capacity and shall be not less than No. 8, A.W.G.

Idem

(2) The grounding conductor for secondary circuits of instrument transformers shall not be smaller than the conductors of the secondary circuit. 1961-62, c. 81, s. 470.

Equipment to be grounded

440.—(1) The exposed non-current-carrying metal parts of all electrical equipment shall be grounded when practicable,

(a) for all equipment over 150 volts; and

- (b) for all equipment under 150 volts where the exposed non-current-carrying metal parts are within reach of exposed grounded surfaces, such as metal frames of other machines, plumbing fixtures, conducting floors or walls.
- (2) Grounded surfaces within five feet horizontally of ^{Idem} the parts considered or within eight feet vertically of the floor shall be considered within reach. 1961-62, c. 81, s. 471.
- 441.—(1) The minimum size of grounding conductor for raceways and fixed equipment shall be not less than that provided by a copper conductor of a size indicated in the following table: ^{Size of equipment grounding conductor}

MINIMUM SIZE OF GROUNDING CONDUCTOR
FOR RACEWAYS AND EQUIPMENT

Rating or Setting of Automatic Overcurrent Device in Circuit Ahead of Equipment, Conduit, etc., Not exceeding—Amperes	Size of Grounding Conductor			
	Copper Wire AWG	Alum. Wire AWG	Conduit or Pipe Inch	Electrical Metallic Tubing Inch
20	16*	14*	1/2	1/2
30	14	12	1/2	1/2
40	12	10	1/2	1/2
60	10	8	1/2	1/2
100	8	6	1/2	1/2
200	6	4	1/2	1
400	4	2	3/4	1 1/4
600	2	0	3/4	1 1/4
800	0	00	1	2
1000	00	000	1	2
1200	000	0000	1	2

*Permissible only when part of an approved cable assembly.

- (2) Where the grounding conductor is run outside the ^{Idem} cable armour or conduit enclosing the associated circuit conductors, the minimum size of such a grounding conductor shall be No. 8, A.W.G. 1961-62, c. 81, s. 472.
442. Flexible cord used to supply portable equipment having a rating of fifteen amperes or less at voltages not exceeding 250 volts shall have included in the cord assembly a grounding conductor whose size shall be, ^{Grounding conductor size for portable equipment}
- (a) not smaller than No. 16, A.W.G. if uninsulated, or No. 18, A.W.G. if insulated; and

- (b) at least the same size as the current-carrying conductors, except that, in cords of No. 12, A.W.G. and larger, it may be two A.W.G. sizes smaller than the other conductors. 1961-62, c. 81, s. 473.

Means of attachment to circuits and equipment

443. The grounding conductor, bond or bonding jumper shall be attached to circuits, conduits, cabinets, equipment and the like, which are to be grounded, by means of suitable lugs, pressure connectors, clamps or other approved means. 1961-62, c. 81, s. 474.

Material for grounding conductors

444. The grounding conductor shall be of copper or other metal that will not corrode excessively under the existing conditions. 1961-62, c. 81, s. 475.

Piping system used as ground

- 445.—(1) Ground connections to metallic water or air systems shall be made beyond any point liable to disconnection.

Idem

- (2) Main water or air lines shall be substantially bonded together for this purpose, but shall, unless connected to a buried piping system of considerable extent that will provide a low-resistance ground, be connected to an artificial ground electrode. 1961-62, c. 81, s. 476.

Means of attachment to ground electrode

446. The grounding conductor shall be connected to the grounding electrode by means of a substantial ground clamp or other equivalent means. 1961-62, c. 81, s. 477.

Artificial electrodes

- 447.—(1) Artificial ground electrodes shall consist of driven pipes, rods, buried plates or other devices acceptable for the purpose.

Idem

- (2) Electrodes of iron or steel pipe shall be not less than $\frac{3}{4}$ -inch internal diameter and shall be galvanized.

Idem

- (3) Rod electrodes shall be not less than $\frac{5}{8}$ -inch in diameter if of iron or steel or $\frac{1}{2}$ -inch in diameter if of non-ferrous metal. 1961-62, c. 81, s. 478.

Resistance of electrodes

448. The grounding system shall be connected to the body of the earth, on the surface, through an earth-contact resistance acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 479, *amended*.

449. The earth-contact of the main grounding system and supplementary earth-contacts shall be provided with means to facilitate measurement of earth-contact resistances. 1961-62, c. 81, s. 480. ^{Resistance measurement}

WIRING METHODS

450. Conductors shall be suitable for the location, use and voltage of the circuit and shall have sufficient current-carrying capacity for the current they are required to carry. 1961-62, c. 81, s. 481. ^{Types of conductors}

451. Portable conductors supplying mobile equipment operating at more than 300 volts shall conform with the following specifications: ^{Portable power conductors}

1. The cable shall have a voltage rating not less than 50 per cent higher than the normal operating voltage of the circuit.
2. Cable of standard rating for the normal operating voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,
 - i. limit ground fault current, and
 - ii. limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,

and where ground fault protection is provided.

3. All conductors including grounding conductors shall be contained in one flexible, jacketed cable assembly.
4. Where the cable contains both the power circuit and its remote control circuit, each circuit conductor shall be insulated, as required by paragraphs 1 and 2, for the highest potential employed in the cable, except that, where sheathing, as in paragraph 10, is provided, the control conductors need only be insulated for their normal operating voltage.
5. The minimum size of the power conductors shall be No. 12, A.W.G.

6. The cable shall contain as many grounding conductors as power conductors and the grounding conductors shall be located in the outer interstices between the power conductors.
7. Remote control conductors contained in the cable need not be considered power conductors in determining the number of grounding conductors.
8. The grounding conductors contained in the cable shall be uninsulated and shall have a total conductance of not less than 60 per cent of the largest power conductor.
9. The minimum size of each grounding conductor shall be not less than No. 12, A.W.G.
10. Cables on circuits operating over 750 volts shall have a grounded sheathing, consisting of tinned copper wire mesh, or the equivalent, around each power conductor, and this sheathing shall be, throughout the length of the cable, in contact with the interstitial grounding conductors.
11. Where connectors are used to attach cables to mobile equipment, the cable shall be secured in such a manner as to prevent mechanical damage.
12. Portable cable used to supply equipment in underground workings shall have an outer jacket of a material that will not support combustion and shall be continuously identified as having such a jacket. 1961-62, c. 81, s. 482, *amended*.

Guarding of
live parts

452.—(1) All exposed current-carrying parts of electrical equipment, such as bus-bars, conductors and terminals, operating at over 150 volts, shall be,

- (a) armoured;
- (b) enclosed in a suitable raceway; or
- (c) isolated by elevation or guarded. 1961-62, c. 81, s. 483.

Open
wiring

- (2) Except in cases of emergency, open wiring shall not be used. *New*.

453. All conductors of an a.c. circuit shall be contained in the same raceway. 1961-62, c. 81, s. 484. A.C. circuits in raceways
454. Where conductors of different systems are installed in the same raceway or armouring, each conductor shall be insulated for the highest potential employed or, in the case of a raceway, separated by a suitable barrier. 1961-62, c. 81, s. 485. Conductors of different systems in raceways or armouring
455. Conductors of different systems shall not be installed in the same box, cabinet or auxiliary gutter unless effectively separated by barriers. 1961-62, c. 81, s. 486. Conductors of different systems in enclosures
456. Identifying barriers shall be provided between circuits where more than one set of single-pole, blade-type isolating switches are installed adjacent to each other. 1961-62, c. 81, s. 487, *amended*. Barriers
457. Metal-covered and insulated conductors in conduit, where joined to transformers, motors, switchgear and other apparatus, shall have their metal coverings secured to such apparatus by clamps, locknuts or other devices to protect the insulated conductors from mechanical injury. 1961-62, c. 81, s. 488. Connections to apparatus

PROTECTION AND CONTROL

- 458.—(1) The type and rating of protective and control devices shall be suitable for their use. Type and rating of protective and control devices
- (2) All protective and control devices installed outdoors shall be of a design suitable for their location. 1961-62, c. 81, s. 489. Idem
- 459.—(1) Each ungrounded conductor shall be protected by an overcurrent device at the point where it receives its supply of current and at each point where the size of the conductor is decreased, except that such protection may be omitted, Overcurrent devices required
- (a) where the branch circuit is not more than twenty-five feet in length;
 - (b) where the protection for a larger conductor adequately protects a smaller; and
 - (c) where the opening of the circuit may cause special hazard by the interruption of service or removal of protection.

- | | |
|----------------------------------|--|
| Idem | (2) The rating or setting of the protective device shall not exceed the allowable current-carrying capacity of the circuit conductors except in the case of branch motor circuits where the rating or setting of the device may be increased sufficiently to take care of motor-starting currents. |
| Idem | (3) Unless the opening of the device disconnects all circuit conductors at the same time, no manually-operated or automatically-operated disconnecting device shall be placed in a neutral or grounded conductor. 1961-62, c. 81, s. 490. |
| Enclosure of overcurrent devices | 460. Overcurrent devices shall be enclosed in cut-out boxes or cabinets unless they form a part of an approved assembly that affords equivalent protection or unless mounted on switchboards, panel-boards, or controllers located in rooms or enclosures free from easily ignitable material and dampness, and accessible only to authorized persons. 1961-62, c. 81, s. 491. |
| Control devices, general | 461.—(1) Suitable control devices shall be inserted in all feeders and branch circuits. |
| Idem | (2) All control devices shall be readily and safely accessible to authorized persons and shall be so located, labelled or marked as to afford means of identifying circuits or equipment supplied through them and shall indicate whether they are open or closed. 1961-62, c. 81, s. 492. |
| Rating of control devices | 462.—(1) Control devices shall have ratings suitable for the connected load of the circuits they control and, with the exception of isolating switches, shall be capable of interrupting such loads. |
| Grouping of control devices | (2) Control devices shall be grouped where practicable. |
| Location of control devices | (3) All control devices shall be so arranged that the operating mechanisms are readily accessible to the operator. 1961-62, c. 81, s. 493. |
| Enclosure of control devices | 463.—(1) Control devices, unless they are located or guarded so as to render them inaccessible to unauthorized persons and to prevent fire hazards, shall have all current-carrying parts in enclosures of metal or other fire-resisting material. |
| Idem | (2) Manually-operable control devices shall be so constructed that they may be switched to the "off" position without exposing live parts. |

- (3) Manually-operable control devices shall clearly indicate the "on" and "off" positions. 1961-62, c. 81, s. 494. ^{Idem}
464. Control devices shall, if practicable, be so connected that the blades or moving contacts will be dead when the device is in the open position. 1961-62, c. 81, s. 495. ^{Connection of control devices}
465. Control devices used in combination with overcurrent devices or overload devices for the control of circuits or apparatus shall be connected so that the overcurrent or overload devices will be dead when the control device is in the open position. 1961-62, c. 81, s. 496. ^{Control devices ahead of overcurrent devices}
- 466.—(1) Disconnecting means of the visible-break type shall be installed on all circuits operating at over 300 volts to ground and shall be as near as is practicable to the point of supply. ^{Visible break requirement}
- (2) Unless a control device on circuits over 300 volts makes a visible break, there shall be installed between the control device and its point of supply a suitable disconnecting switch. 1961-62, c. 81, s. 497. ^{Idem}
- 467.—(1) On each ungrounded utilization system over 300 volts, at least one suitable device shall be installed and maintained for the purpose of indicating ground faults. ^{Ground fault detector requirement}
- (2) Such device shall be provided with, ^{Idem}
- (a) short-circuit protection; and
- (b) disconnecting means. 1961-62, c. 81, s. 498 (1, 2).
- (3) When a ground fault is indicated, it shall be located and removed as soon as is practicable. 1961-62, c. 81, s. 498 (4). ^{Idem}
468. Adequate illumination shall be provided to allow for proper operation of electrical equipment. 1961-62, c. 81, s. 499. ^{Illumination of equipment}
469. Where electrical equipment requires an attendant, there shall be provided a separate emergency source of illumination from an independent generator, storage battery or other suitable source. 1961-62, c. 81, s. 500. ^{Emergency illumination of equipment}

INSTALLATION OF EQUIPMENT

Working
space

470. Adequate clear working space with secure footing shall be provided about all electrical equipment. 1961-62, c. 81, s. 501.

TRANSFORMERS

General

471. Transformers shall be of a type and design suitable for the location in which they are to be installed. 1961-62, c. 81, s. 502.

Nameplate
required
for trans-
formers

472. Each transformer shall be provided with a nameplate bearing the following markings:
1. Maker's name.
 2. Rating in kva.
 3. Rated full load temperature rise.
 4. Primary and secondary voltage ratings.
 5. Frequency in cycles per second.
 6. Liquid capacity, if of the liquid-filled type.
 7. Type of liquid to be used, if it is to be filled with an approved liquid that will not burn in air. 1961-62, c. 81, s. 503.

Isolation
and
guarding
of trans-
formers

473. Transformers having a voltage rating in excess of 750 volts and all transformers having exposed terminals, including their conductors and control and protective devices, shall be accessible only to authorized persons and, unless isolated by elevation, they shall be surrounded by an enclosure that, if of metal, shall be grounded, and suitable warning signs indicating the highest potential employed shall be conspicuously posted. 1961-62, c. 81, s. 504.

Special
trans-
formers

- 474.—(1) Dry-core type transformers with Class A insulation, if installed within a building not of fire-resistive construction, shall be in a fire-resistive enclosure.

Idem

- (2) Transformers containing an approved liquid that will not burn in air and transformers of the dry-core type with Class B or Class C insulation may be installed within or attached to the wall of a building not of fire-resistive construction, if they are surrounded by a suitable enclosure to prevent mechanical injury and access by unauthorized persons. 1961-62, c. 81, s. 505.

- 475.—(1) Oil-filled transformers installed outdoors shall ^{Liquid-filled trans-} be located not less than fifty feet distant from the ^{formers} shafthouse or any combustible building attached thereto, and means shall be provided to contain escaping oil or to direct the flow away from such buildings.
- (2) Oil-filled transformers shall not be mounted on or ^{Idem} above combustible roofs and, if attached to the exterior of a building other than a transformer-house, shall be placed only against non-combustible walls and away from all openings.
- (3) Transformer buildings containing oil-filled trans-^{Idem} formers, if not entirely of fire-resistive construction, shall be located at least fifty feet distant from any other combustible building.
- (4) Oil-filled transformers, if within a building other ^{Idem} than a transformer-house, shall be in a vault.
- (5) Transformers having their cores immersed in a liquid ^{Idem} that will not burn in air may be installed without a vault if,
- (a) the transformer is protected from mechanical damage either by location or guarding;
 - (b) a pressure relief vent is provided where the rating exceeds 25 kva at 25 cycles or $37\frac{1}{2}$ kva at 60 cycles; and
 - (c) a means of absorbing gases generated by arcing inside the case, or a pressure relief vent connected to outdoors, is provided where the transformer is installed in a poorly-ventilated section. 1961-62, c. 81, s. 506.
- 476.—(1) When primaries are above 750 volts, secondary ^{Instrument trans-} circuits of current and potential transformers, unless ^{formers} otherwise adequately protected from injury or contact with persons, shall be in permanently-grounded conduit or armour.
- (2) Secondary circuits of current transformers shall be ^{Idem} provided with means for short-circuiting them that can be readily connected while the primary is energized and that are so arranged as to permit the removal of any instrument or other device from the circuits without opening the circuits. 1961-62, c. 81, s. 507.

Overcurrent
protection
for trans-
formers

477. Each transformer or each bank of transformers operating as a unit shall have overcurrent protection. 1961-62, c. 81, s. 508.

Control and
protection
require-
ments

478.—(1) Control and protective devices, complying with one of the following, shall be installed for all power and distribution transformers:

(a) Circuit-breakers of adequate interrupting capacity and rating.

(b) Fuses of adequate rating and interrupting capacity preceded by suitable group-operated visible-break load-interrupting devices capable of making and interrupting their full load rating and that may be closed with safety to the operator with a fault on the system.

(c) Fuses of adequate rating and interrupting capacity preceded by a group-operated visible-break air-break switch capable of interrupting the magnetizing current of the transformer installation and that may be closed with safety to the operator with a fault on the system and so interlocked with the transformer secondary load interrupters as to prevent its operation under load.

Idem

(2) Where the transformer rating does not exceed 100 kva per phase and the potential between phases does not exceed 7,500 volts, a single-pole disconnecting fuse of adequate interrupting capacity may be used on the primary. 1961-62, c. 81, s. 509.

SWITCHBOARDS AND SWITCHGEAR

General

479. Panels of switchboards shall be of incombustible material and shall be substantially supported on a metal framework. 1961-62, c. 81, s. 510.

Illumination
of switch-
boards

480. Adequate illumination shall be provided for reading instruments and other operations. 1961-62, c. 81, s. 511.

Location of
switchgear

481. Switchgear, if not of the dead-front or enclosed type, and live parts on the rear of dead-front switchboards shall be inaccessible to unauthorized persons. 1961-62, c. 81, s. 512.

- 482.—(1) There shall be a space of not less than three feet ^{Clearance back of} between equipment on the back of a fixed switch-switchboard and the nearest adjacent wall when such equipment is less than seven feet from the floor.
- (2) Ready means for ingress and egress to the space ^{Ingress and egress} behind the switchboard shall be provided.
- (3) Doors or gates of suitable material may be provided ^{Doors, etc.} at such points for guarding-purposes but they shall be capable of being readily opened from the inside without the use of a key or tool.
- (4) The space behind the switchboard shall be kept ^{Space to be kept clear} clear of foreign material and shall not be used for storage purposes. 1961-62, c. 81, s. 513.

TRANSMISSION LINES

483. All electrical supply lines and equipment shall be of ^{General} suitable design and construction for the service and the conditions under which they are to be operated, and all lines shall be so installed and maintained as to reduce fire hazard and injury to persons as far as is practicable. 1961-62, c. 81, s. 514.
484. Conductors and other current-carrying parts of ^{Isolation and guarding} supply lines shall be so arranged as to provide adequate clearance from the ground or other space generally accessible or shall be provided with guards so as to isolate them effectively from accidental contact of persons. 1961-62, c. 81, s. 515.
485. Where conductors over 300 volts are attached to ^{Entrance to buildings} any building for entrance, they shall be isolated by elevation or guarded. 1961-62, c. 81, s. 516.
- 486.—(1) Supply lines carried over railways operated by ^{Clearance over railways} steam, electric or other motive power and on which standard equipment, such as freight cars, is used shall have the style of construction and the clearances overhead as called for in the regulations of the Canadian Transport Commission.
- (2) Supply lines crossing over railways on which ^{Idem} standard equipment is not used and lines crossing over roadways shall have ample clearance for the operating conditions and shall be substantially supported. 1961-62, c. 81, s. 517.

STORAGE BATTERIES

Location
of storage
batteries

487. Storage batteries shall be kept in inaccessible battery rooms or enclosures used for no other purpose where,
- (a) the aggregate capacity at the eight-hour discharge rate exceeds five kilowatt hours; and
 - (b) the batteries are in unsealed jars or tanks.
- 1961-62, c. 81, s. 518.

Ventilation
of battery
rooms

- 488.—(1) Storage battery rooms shall be thoroughly ventilated.

Idem

- (2) Adequate means shall be provided for sufficient diffusion and ventilation of the gases from the battery to prevent the accumulation of an explosive mixture. 1961-62, c. 81, s. 519.

LIGHTNING ARRESTERS

Indoor
installation
of lightning
arresters

489. Where lightning arresters are installed in a building, they shall be located well away from all equipment, other than that which they protect, and from passageways and combustible parts of buildings. 1961-62, c. 81, s. 520.

Location of
lightning
arresters

490. Lightning arresters installed for the protection of utilization equipment,
- (a) may be installed either inside or outside the building or enclosure containing the equipment to be protected; and
 - (b) shall be isolated by elevation or guarded.
- 1961-62, c. 81, s. 521.

Grounding

- 491.—(1) All non-current-carrying parts of lightning arresters shall be grounded, unless effectively isolated by elevation or guarded as required for live parts of the voltage of the circuit to which the arrester is connected.

Idem

- (2) Grounding conductors for lightning arresters on power transmission systems shall be run as directly as possible and be of low resistance and ample capacity.

Idem

- (3) In no case shall such grounding conductors be less than No. 6 copper wire, nor shall such grounding conductors pass through metal conduits unless electrically connected to both ends of the conduits. 1961-62, c. 81, s. 522.

MOTORS

492. All motors shall be provided with approved starting and control equipment. 1961-62, c. 81, s. 523, *amended*. Control required
493. Where it is desired to interlock one motor control circuit with a second motor controller, Interlocking motor circuits
- (a) the supply or control conductors of one motor branch circuit shall not be run through or connected into the enclosure of a second motor controller unless such conductor or conductors are opened and de-energized by the disconnecting means of the second motor branch circuit; or
 - (b) a suitable relay may be interposed between the two controllers and located externally to both controllers. *New.*
494. In all cases, the motor-circuit switch, general-use switch or isolating switch shall be of the visible-break type. 1961-62, c. 81, s. 525. Visible-break requirement
495. Every motor and its starting and control equipment shall be provided with a disconnecting means which will open all ungrounded conductors to the motor and which conforms to one of the following: Disconnecting means required
- 1. An approved attachment plug and receptacle may serve as disconnecting means for a portable motor.
 - 2. An isolating switch or a general use switch may be used as a disconnecting means for motors of more than 50 horsepower.
 - 3. In all other cases the disconnecting means shall consist of a motor circuit switch, a circuit breaker, or equivalent approved device capable of safely establishing and interrupting the stalled rotor current of the motor. *New.*
496. The disconnecting means shall have a rating not less than the following: Rating of disconnecting means
- 1. A motor circuit switch for a single motor shall have a horsepower rating, not less than that of the motor it serves.

2. A circuit breaker or isolating switch for a single motor shall have a current rating not less than 115 per cent of the full load current rating of the motor it serves.
 3. A fused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required to accommodate the proper size of fuse.
 4. An unfused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required if a fused switch were used.
 5. A disconnecting means serving a group of motors on a single circuit shall have,
 - i. a horsepower rating not less than that of the largest motor in the group, if a motor circuit switch is used, and
 - ii. a current rating not less than 115 per cent of the full load current rating of the largest motor in the group plus the sum of the full load current ratings of all the other motors in the group which may be in operation at the same time.
- New.*

Under-voltage protection required

497. Motors shall be disconnected from the source of supply in case of low voltage by one of the following means unless it is evident that no hazard will be incurred through the lack of such disconnection:

1. Where automatic restarting is liable to create a hazard, the motor control device shall provide low-voltage protection.
2. Where it is necessary or desirable that a motor stop on failure or reduction of voltage and automatically restart on return of voltage, the motor control device shall provide low-voltage release. 1961-62, c. 81, s. 528, *amended*.

Overload protection required

498. Each motor shall be suitably protected against continuous overload.

CRANES, SHOVELS AND OTHER SIMILAR MACHINERY

- 499.—(1) Crane collector wires shall be isolated by elevation and, where necessary, guarded. Guarding and isolation
- (2) Suitable means that will disconnect, under load, all ungrounded conductors of the circuit supplying a crane, as defined in subsection 1 of section 249, shall be, Disconnecting means
- (a) provided within sight of the main contact conductors or within sight of the equipment if there are no main contact conductors; and
 - (b) accessible and operable from the ground or the floor over which the equipment operates. 1961-62, c. 81, s. 530.
- (3) A circuit-breaker or switch, capable of interrupting the circuit under heavy loads, shall be used unless the current collector can be safely removed, under heavy loads, from the crane collector wires. 1961-62, c. 81, s. 531. Switch required in cab
500. Where it is necessary to operate shovels or other similar machinery having a mast or movable boom near exposed electrical conductors, a clearance equal to not less than one-half the maximum horizontal reach of the machine shall be maintained unless, Protection from overhead lines
- (a) the conductors are disconnected from the electrical supply and permission to work on the conductors has been authorized; or
 - (b) the conductors are first given adequate mechanical protection by the electrical authority involved, to prevent contact by the machine, its attachments or load; or
 - (c) the work involves the conductors and is being carried out by qualified electrical personnel using a machine with an insulated boom designed, built and tested for use on electrical potentials at least as high as that of the conductor involved; or
 - (d) special permission has been obtained from the district electrical-mechanical engineer and under such conditions and precautions as he may require. *New.*

TROLLEY WIRES

Guarding
and
isolation

501. Trolley lines shall be isolated by elevation and, where necessary, guarded. 1961-62, c. 81, s. 532.

Require-
ments for
trolley lines
under-
ground

502. In underground workings, trolley lines shall,

- (a) be isolated by an elevation of not less than six feet;
- (b) operate at a potential not exceeding 300 volts to ground;
- (c) be effectively guarded. 1961-62, c. 81, s. 533.

LIGHTING

Maximum
operating
voltage

503. The operating voltage of a lighting circuit shall not exceed 300 volts and the voltage to ground of a conductor shall not exceed 150 volts, but this section does not apply in the case of electric locomotives and cranes using direct current. 1961-62, c. 81, s. 534.

Neutral
identifica-
tion

504. The neutral conductor on lighting circuits shall be identified by a white braid covering or other equivalent means. 1961-62, c. 81, s. 535.

Portable
hand lamps

505. Portable lamps shall have their sockets enclosed in suitably-insulated handles through which the conductors shall be carried and shall have a protective cage that encloses the lamp. 1961-62, c. 81, s. 536.

WIRING IN EXPLOSIVES AND BLASTING
AGENTS STORAGEES

General

506. All electrical wiring in explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses, shall be installed in rigid conduit with screwed water-tight joints or shall be armoured, moisture-proof cable. 1961-62, c. 81, s. 537.

Grounding

507. All conduit, armour, fittings and fixtures shall be permanently grounded. 1961-62, c. 81, s. 538.

Location
of control
and
protection

508. The switches and fuses for lighting, heating or telephone circuits for explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings and cap and fuse houses shall be in a fire-resistive cabinet located outside the compartment in which explosives, blasting agents, fuses or detonators, or blasting caps, are stored. 1961-62, c. 81, s. 539.

509. Lighting fixtures shall be of an approved dust-tight type. 1961-62, c. 81, s. 540. Type of lighting fixtures required
510. Lighting circuits shall be protected by fuses or manual reset overcurrent devices rated at not more than 10 amperes. 1961-62, c. 81, s. 541, *amended*. Overcurrent protection for lighting circuits
511. Circuits supplying power to explosives or blasting agents storages shall be protected against lightning surges. 1961-62, c. 81, s. 542. Lightning protection
512. Heating systems for explosives or blasting agent storages or cap and fuse houses shall be of a type acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 543, *amended*. Type of heating required
513. Where a liquid is the medium used for distribution of heat for an explosive or blasting agent storage or a cap and fuse house the radiators shall be grounded. 1961-62, c. 81, s. 544, *amended*. Radiators to be grounded
514. Heater circuits shall be fused at not more than 125 per cent of normal current. 1961-62, c. 81, s. 545. Fusing of heater circuits

ELECTRIC BLASTING DEVICES

515. The firing device used for firing charges with electricity in accordance with subsection 3 of section 310 shall be so arranged that, Construction
- (a) the switch mechanism will automatically return by gravity to the open position;
 - (b) the live side of such device is installed in a fixed locked box and shall be accessible only to the authorized blaster;
 - (c) provision is made that the leads to the face are short-circuited when the contacts of the electric blasting device are in the open position;
 - (d) the box in which the electric blasting device and the short-circuiting device are mounted is provided with a lock and the door is so arranged that it cannot be closed or locked unless the contacts of the electric blasting device is in place;
 - (e) where electricity from 550-volt circuits is used for blasting, the device shall be electromagnetically operated, except as provided in subsection 3 of section 310.

Precautions
re installa-
tion of
blasting
cables

516. When blasting cables or wires are installed in the vicinity of power or lighting cables, proper precautions shall be taken to prevent the blasting cables or wires coming in contact with the lighting or power cables. 1961-62, c. 81, s. 547.

Isolated,
ungrounded
power
source

517. Circuits used for blasting from any source other than hand-held portable blasting devices shall be from an isolated, ungrounded power source and shall be used for blasting only. 1961-62, c. 81, s. 348, *amended*.

ELECTRIC HOISTS

General

518. Sections 519 to 544 apply to all electric hoists regardless of the method of operation. 1961-62, c. 81, s. 549.

Braking

519.—(1) For each electric hoist, protective devices shall be provided, which, in conjunction with the mechanical braking system, shall be capable of bringing a conveyance or counterbalance safely to rest under all conditions of authorized loading, direction of travel and speed without assistance from the drive.

Idem

(2) Where supplementary electrical braking is employed, at least the same degree of safety shall be supplied. 1961-62, c. 81, s. 550.

Safety
requirement

520. Except where otherwise specified, current-carrying parts of any safety device shall be so designed, installed and maintained that the failure of any such part will initiate emergency braking action to bring the hoist safely to rest. 1961-62, c. 81, s. 551.

Track limits
required
for
overwind
protection

521. Devices shall be installed in each hoisting compartment that, in the event of an overwound conveyance or counterbalance, shall be operated directly by the conveyance or counterbalance to initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage. 1961-62, c. 81, s. 552.

Underwind
protection
required

522. Devices shall be installed for each hoisting compartment that, in the event of an underwound conveyance or counterbalance, shall initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 553.

523. Devices, driven from the operating drum or drums, shall be installed, where the hoist operates at a rope speed of 750 feet per minute or greater, that, in the event of an overwound or underwound conveyance or counterbalance, will initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments meet any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 554. ^{Overwind and underwind requirements for high-speed hoists}
524. Each electric hoist shall have installed a device that will initiate an emergency stop and bring the conveyance or counterbalance to rest safely should the rope speed exceed the authorized maximum by a predetermined amount. 1961-62, c. 81, s. 555. ^{Overspeed}
525. Devices, driven from the operating drum or drums, shall be installed where the hoist operates at a rope speed of 750 feet per minute or greater, that will enforce any necessary reduction in speed as the conveyance approaches the end of travel. 1961-62, c. 81, s. 556. ^{Enforced slowdown}
526. No person shall alter the adjustment of any protective device without proper authority. 1961-62, c. 81, s. 557. ^{Adjustment of protective devices}
- 527.—(1) Where ore or waste dumps, loading boxes or spill-doors are installed in a shaft or winze at points other than the upper and lower limits of normal travel of a conveyance and where any part of such dump box or door interferes with the free passage of a conveyance, there shall be installed, ^{Intermediate obstructions}
- (a) travel-limiting devices which, when necessary, shall meet the requirements of section 523;
 - (b) travel-limiting devices as required by section 523, where required;
 - (c) enforced slow-down devices as required by section 525, where applicable; and
 - (d) positive locking devices for maintaining such obstructions out of the operating position in the shaft or winze.
- (2) The manager, or his agent, of a mine employing such an intermediate obstruction shall provide a procedure to be followed to ensure the safe operation of the installation. ^{Idem}

- Idem (3) Before such an installation is made, plans and procedure shall be submitted to the chief engineer for approval. 1961-62, c. 81, s. 558.
- Protection required for hoist electrical system 528. Emergency braking action shall be initiated to bring a conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage in the event of,
- (a) the failure of the power supply to the hoist electric system;
 - (b) an overload on the hoist-drive motors of a magnitude and duration exceeding what would be considered an operating overload; or
 - (c) a short-circuit on the hoist electric system. 1961-62, c. 81, s. 559.
- Backout 529.—(1) Every electric hoist shall have installed a device to enable a conveyance or counterbalance to be removed from an overwound or underwound position.
- Idem (2) Every such device shall be manually operable only. 1961-62, c. 81, s. 560.
- Backout switch, motor torque-break interlock (3) Every such device shall be so designed and installed that the brake or brakes holding a conveyance or counterbalance, when in an overwound or underwound position, cannot be released until sufficient drive motor torque has been developed to ensure movement of the conveyance or counterbalance in the correct direction only. *New.*
- Emergency switch 530. A manually-operable switch shall be installed for each electric hoist within reach of the manual controls that will, when operated, initiate emergency braking action to bring the conveyance or counterbalance safely to rest. 1961-62, c. 81, s. 561.
- Underwind by-pass switch 531. An underwind by-pass switch may be installed, where necessary, that will allow the conveyance to be lowered through the underwind position if it is held in the closed position by the hoistman and will return automatically to the open position when not so held. 1961-62, c. 81, s. 562.
- Load meter required 532. Each electric hoist shall have installed, within plain view of the manual controls, a meter that will indicate, at all times, the hoist motor load. 1961-62, c. 81, s. 563.

- 533.—(1) Where men are transported in skips or the skips of skip-cage assemblies, there shall be installed a device that will prevent the conveyance, carrying the men, from entering the dumping position. ^{Man-safety require-ments}
- (2) Except in shaft sinking, such device shall be so installed that, when it is put into operation, a distinctive signal will be given, automatically, to men about to enter the conveyance. ^{Idem}
- (3) Such device is not required on electric hoists where men are hoisted for shaft inspection or maintenance operations only. ^{Idem}
- (4) Such device shall be put into operation, either manually or automatically, when men are transported. ^{Idem}
- (5) In those cases where the device is automatically put into operation by the hoistman's return of the 3-bell signal, the circuit shall be so arranged that the failure of the relay coils will not render the device inoperative. 1961-62, c. 81, s. 564. ^{Idem}
534. Each electric hoist shall have installed a device whereby the hoistman is warned, audibly, that a conveyance or counterbalance is about to enter the region where a reduction in speed is necessary for safe manual braking. 1961-62, c. 81, s. 565. ^{Approach warning signal}
535. Sections 536 to 544 apply to all electric hoists that may be operated automatically. 1961-62, c. 81, s. 566. ^{Automatic hoists}
- 536.—(1) Every electric hoist shall have installed, only in the same location as the manual controls, a device for the change-over from manual to automatic control. ^{Selection of manual or automatic control}
- (2) Such device shall be operated by authorized personnel only. 1961-62, c. 81, s. 567. ^{Idem}
537. Where an electric hoist is designed to be operated from control stations on the levels or from a control station on the conveyance, any device used to effect the change-over of control shall be operable only at the level at which a conveyance is stopped. 1961-62, c. 81, s. 568. ^{Level or cage control}

- | | |
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| Operation
of level-
installed
controls | 538.—(1) Devices installed on the levels for the purpose of selecting the conveyance's destination and for initiating hoist motion shall be operable only when the conveyance is stopped at that level, except where the installation has been approved for call operation. |
| Idem | (2) There shall be a minimum delay of five seconds between the operation of the level control device used to initiate hoist motion and the actual motion when men are being handled. |
| Idem | (3) The level control device used to initiate hoist motion shall be so located that it may be operated by someone in the conveyance stopped at that level. |
| Idem | (4) Devices installed on the levels for the purpose of initiating hoist motion shall, except for jogging, be operable only when the shaft gate at the level at which the conveyance is stopped is in the closed position. 1961-62, c. 81, s. 569. |
| Operation
of cage-
installed
control | 539.—(1) Devices installed in a conveyance for the purpose of controlling hoist motion shall, except for jogging, be operable only when the cage door is in the closed position. |
| Idem | (2) Where devices are installed in a conveyance for the purpose of controlling hoist motion, one of the devices shall be capable of initiating emergency braking action to bring the conveyance safely to rest. 1961-62, c. 81, s. 570. |
| Friction
hoists | 540. Sections 541 to 544 apply to all electric friction hoists. 1961-62, c. 81, s. 571. |
| Jammed
conveyance
device | 541. Each electric friction hoist shall have installed a device that will initiate emergency braking action to bring the drum to rest in the event of the occurrence of slip between the hoisting rope or ropes and the hoist drum, such as might occur with a conveyance or counterbalance jammed in the shaft or caught at the end of travel. 1961-62, c. 81, s. 572. |
| Synchroniz-
ing device | 542. Where creep or slip may alter the effective position of safety devices, a means of synchronizing the safety devices with the position of the conveyance in the shaft shall be provided. 1961-62, c. 81, s. 573. |
| Special
testing | 543. If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific |

tests of the efficiency of all electric overwind and underwind devices, signalling and warning devices and hoisting controls and equipment. 1961-62, c. 81, s. 574, *amended*.

- 544.—(1) The manager of a mine where an electric hoist ^{Electrical Hoisting Equipment Record Book} is in use shall depute some competent person or persons whose duty it is to examine at least once in each week the hoist motor and control apparatus, electric safety devices and hoisting signalling equipment. 1961-62, c. 81, s. 575 (1), *amended*.
- (2) The report of such examination shall be recorded as ^{Idem} provided in subsection 3. 1961-62, c. 81, s. 575 (2).
- (3) The manager shall keep or cause to be kept at the mine for each hoist a book called the Electric Hoisting Equipment Record Book in which shall be recorded a report of every such examination and a notation of any failure or accident to such equipment and the action taken regarding it, signed by the person making the examination. 1961-62, c. 81, s. 575 (3), *amended*.
- (4) Such entries of the weekly examination shall be read ^{Idem} and signed every week by the person in charge of such equipment or accessories thereto.
- (5) A notation of the action taken regarding the report ^{Idem} of any failure or accident to any part of the electrical equipment used in connection with the hoist or the signalling equipment shall be made over the signature of the person in charge of such equipment or accessories thereto. 1961-62, c. 81, s. 575 (4, 5).
- (6) The Electrical Hoisting Equipment Record Book ^{Idem} shall be made available to the district electrical-mechanical engineer at all times. 1961-62, c. 81, s. 575 (6), *amended*.

UNDERGROUND INSTALLATIONS

545. The provisions of this Part that apply to surface ^{General} installations apply equally to underground installations, except sections 546 to 563, which apply only to underground installations. 1961-62, c. 81, s. 576.
- 546.—(1) Where electrical energy is taken underground, ^{Control of underground feeders} provision shall be made so that the current may be cut off on the surface.

- Idem* (2) The control device shall be accessible to authorized persons only. 1961-62, c. 81, s. 577.
- Wiring methods* 547.—(1) Conductors for all circuits not over 150 volts to ground shall either be installed in standard conduits, armoured or have non-flammable jackets and be adequately supported. 1961-62, c. 81, s. 578 (1).
- Idem* (2) All fixed conductors transmitting power underground at over 150 volts to ground shall be installed in standard conduits or armoured, shall be adequately supported, and any outer jacketing shall be of a non-flammable type.
- Idem* (3) Open-type wiring shall not be used except in cases of emergency. 1961-62, c. 81, s. 578 (2, 3), *amended*.
- Cable test required* 548. All new cables purchased for the transmission of power underground at a potential in excess of 750 volts shall be accompanied by the manufacturer's certified report of insulation tests, a copy of which shall be filed with the chief engineer. 1961-62, c. 81, s. 579.
- Cable rating* 549.—(1) All cables transmitting power underground at a potential exceeding 750 volts shall have a voltage rating of 50 per cent higher than the normal operating voltage. 1961-62, c. 81, s. 580 (1).
- Idem* (2) Cable of standard rating for the normal operating voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,
- (a) limit ground fault current; and
 - (b) limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,
- and where ground fault protection is provided. 1961-62, c. 81, s. 580 (2), *amended*.
- Bonding requirements* 550. The armouring or casings of all cables shall be bonded together so as to be electrically continuous and shall be connected at some point or points to a satisfactory ground on surface. 1961-62, c. 81, s. 581.

551. Where the armouring or casings of cables do not provide an adequate grounding system for underground electrical equipment, a copper or other non-corrosive grounding conductor of adequate size shall be run from such equipment to a satisfactory ground on surface. 1961-62, c. 81, s. 582. Adequate grounding for equipment
552. Suitable terminating facilities shall be provided to protect cables from harm due to moisture or mechanical damage. 1961-62, c. 81, s. 583. Terminating facilities
553. Junction boxes on a cable transmitting power at a potential exceeding 300 volts shall not be located in a shaft or winze or attached to any timbers at a shaft or winze station or headframe. 1961-62, c. 81, s. 584. Location of junction boxes
554. Splices shall not be made in shaft or winze conductors unless approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 585, *amended*. Approval of splices
555. Adequate precautions shall be taken to prevent signal and telephone cables from coming into contact with other electric systems. 1961-62, c. 81, s. 586. Protection of signal and telephone cables
556. The operating voltage on signal systems shall not exceed 150 volts to ground. 1961-62, c. 81, s. 587. Maximum voltage of signal system
- 557.—(1) One conductor of the two-wire signal circuit shall be grounded where the power supply is obtained from a transformer having a primary voltage in excess of 750 volts. Grounding of signal system
- (2) The signal system may be operated with both conductors ungrounded when the supply is from a transformer having a primary voltage in excess of 750 volts, if an insulating transformer having a 1-to-1 ratio is installed between the supply and the signal system. 1961-62, c. 81, s. 588. Idem
558. Where an electrical hoisting-signal system is installed at a shaft or winze, there shall be a suitable, separate, audible signal system for the control of each hoisting conveyance operated from a single hoist and there shall be a sufficient difference in the sound of the signals to the hoistman that they are easily distinguishable and it shall be so arranged that the hoistman can return the signal to the person giving the signal. 1961-62, c. 81, s. 589. Separate signal for each conveyance

Trans-
formers,
type and
location

559. The type and location of transformers installed underground are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 590, *amended*.

Trans-
formers and
trans-
former
rooms

- 560.—(1) All transformers over 2 kva, unless insulated with non-flammable di-electric liquids or Class B or Class C insulation, when installed underground, shall be effectively isolated from the mine workings by enclosure in rooms constructed of fire-resistive materials throughout and a door sill of not less than six inches in height shall be provided.

Idem

- (2) No material or equipment of any kind, including air lines, air ducts, water and steam lines, shall pass through or terminate within the room, other than that essential to the transformer installation for its proper operation and safety.

Idem

- (3) The covers of the ventilation openings shall be held open by thermal fuse links and shall close by gravity, and the door shall be constructed of steel or other suitable material. 1961-62, c. 81, s. 591 (1-3).

Idem

- (4) No installation of transformers containing a liquid which will burn in air shall be located within 200 feet of an explosives or blasting agents storage.

Idem

- (5) For installations of transformers containing a liquid which will not burn in air or other suitable types, separation shall be not less than 50 feet from an explosives or blasting agents storage. 1961-62, c. 81, s. 591 (4), *amended*.

Fire
prevention
under-
ground

- 561.—(1) The supports for electric motors, transformers, control and protective equipment and other electric apparatus and the compartments in which they are installed shall be of such material and constructed in such a manner as to reduce the fire hazard to a minimum.

Idem

- (2) No flammable material shall be stored or placed in the same compartment with any such equipment or apparatus. 1961-62, c. 81, s. 592.

Electric
heaters

562. Where lamps or heating units are used underground, they shall be so installed and protected as to prevent the heat generated from becoming a fire hazard. 1961-62, c. 81, s. 593.

563.—(1) Approved fire-extinguishing devices for use on ^{Fire-extinguishing} electrical fires shall be provided and maintained in ^{devices} condition for immediate use.

(2) They shall be conveniently mounted at or in every ^{Idem} place containing electrical apparatus having flammable insulation or parts that, once ignited, may support combustion. 1961-62, c. 81, s. 594.

ELEVATORS

564.—(1) In this section,

^{Interpre-}
^{tation}

(a) “attendant” means a person who, as a whole or a part of his normal duties,

(i) operates an elevator or incline lift, or

(ii) supervises the loading, passage or unloading of persons on an incline lift;

(b) “dumbwaiter” means a hoisting and lowering mechanism equipped with a conveyance which moves in guides in a substantially vertical direction, the floor area of which does not exceed 9 square feet, whose total inside height whether or not provided with fixed or removable shelves does not exceed 4 feet, the capacity of which does not exceed 500 pounds, and which is used exclusively for carrying materials;

(c) “elevating device” means an elevator, escalator, dumbwaiter, incline lift or manlift and includes its hoistway enclosure;

(d) “elevator” means a mechanism affixed to a building or structure equipped with a conveyance or platform that moves in guides at an angle exceeding 70 degrees from the horizontal and that is used to lift or lower persons or freight in or about the building or structure;

(e) “escalator” means a power-driven inclined continuous stairway used for raising or lowering persons;

(f) “freight elevator” means an elevator primarily used for carrying freight and on which only the attendant and the persons necessary for unloading and loading the freight are permitted to ride;

(g) "incline lift" means a mechanism having a power-driven rope, belt or chain, with or without handholds or seats, for lifting or lowering persons or freight on an incline of 70 degrees or less from the horizontal;

(h) "manlift" means a device consisting of a power-driven endless belt provided with steps or platforms and handholds attached to it for the transportation of persons from floor to floor;

(i) "passenger elevator" means an elevator used primarily to carry persons.

Accepted
standards

(2) Elevating devices, except those covered in subsection 3, shall be designed, installed and maintained in accordance with the edition that is current from time to time of C.S.A. Standard B44, "Safety Code for Elevators, Dumb-waiters and Escalators".

Idem

(3) Aerial tramways, incline lifts and manlifts shall be of a type approved by the chief engineer.

Where
section
does not
apply

(4) This section does not apply to,

(a) feeding machines, or belt, bucket, scoop, roller or any similar type of freight conveyor;

(b) a lifting device that is,

(i) part of a conveyor system,

(ii) mechanically loaded and unloaded, and

(iii) so fenced in or guarded as to prevent persons from accidentally entering the hoistway;

(c) freight ramps having a means of adjusting the slope of the ramp;

(d) freight platforms having a rise of sixty inches or less;

(e) lubrication hoists or other similar mechanisms;

(f) piling or stacking machines used within one storey; or

(g) a moving walk.

- (5) No person shall commence a new installation or a ^{New in-}major alteration of an elevator, dumbwaiter, esca-^{stallations}lator, manlift or incline lift until the drawings and specifications thereof have been approved by the chief engineer.
- (6) The drawings and specifications shall be submitted ^{Drawings and specifications} in duplicate and shall furnish full information as to the size, composition and arrangement of the proposed installation or major alteration.
- (7) Upon completion of an installation or major altera-^{Inspection and approval}tion, the elevating device shall not be put into use until it has been inspected and approved by the district electrical-mechanical engineer.
- (8) There shall be kept, securely fastened and con-^{Notices required}spicuously displayed,
- (a) in the conveyance of each elevator, dumbwaiter or incline lift; and
- (b) as close as is practicable to the bottom landing of each manlift,
- a notice, in the form of a metal plate, setting forth the maximum capacity of the elevating device, stating the number of persons and the weight in pounds.
- (9) Every freight elevator shall have displayed in a ^{Idem}conspicuous place in the conveyance a notice in letters not less than one inch high:
- “This is not a passenger elevator. No person other than the attendant and freight handlers are permitted to ride in this conveyance”.
- (10) The ceiling and its supporting structure over every ^{Ceilings}passageway or other occupied space under an elevating device shall be designed, constructed and maintained so as to safely support the loads that would be applied to it if the conveyance and counterweight dropped.
- (11) Where the conveyance and counterweight are both ^{Idem}equipped with devices to stop them or arrest their descent in the event of a failure of their supports, the strength of the ceiling and its supporting structure may be reduced accordingly.

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| Machine
rooms | (12) There shall be provided safe and convenient access to every machine room and machinery space. |
| Idem | (13) Except where otherwise permitted by the chief engineer, such access shall be by a stairway that is not located in the hoistway. |
| Idem | (14) Every machine room and machinery space shall be enclosed or located so that unauthorized persons cannot have access to the machine room or machinery space. |
| Idem | (15) Only machinery and control equipment required for the operation of the elevating device shall be permitted in the machine room. |
| Idem | (16) Sprinklers, pipes, drains, tanks or similar equipment which might leak or cause condensation shall not be located directly above the machine or control equipment. |
| Attendants | (17) No person under the age of eighteen years shall be authorized to operate an elevator. |
| Idem | (18) Subject to subsection 19, an attendant is required for every elevator or incline lift. |
| Idem | (19) An attendant is not required on an elevator or incline lift equipped with automatic controls and emergency stopping devices that will, in the opinion of the chief engineer, ensure the safety of any person having access to or riding on the elevator or incline lift. |
| Lighting
required | (20) Every landing shall be adequately lighted. |
| Test and
repair | (21) No person shall remove, displace, interfere with or damage any device installed in or about an elevating device for its safe operation, except, <ul style="list-style-type: none"> (a) a district electrical-mechanical engineer making an inspection, or (b) a qualified person for the purpose of making a test or repair. |
| Restoration
of service
after
damage | (22) Where a safety device has been removed, displaced, interfered with or damaged, the elevating device shall not be used or operated for any purpose other than testing, inspection or repair until the safety device has been restored to working order. |

- (23) The ropes, safety devices, signalling devices, doors ^{Inspection} and other electrical and mechanical equipment necessary to the safe operation of elevating devices shall be inspected by a qualified person at least once each month and the results recorded.
- (24) The records of such inspections shall be made ^{Records} available to an engineer.
- (25) Hoisting or tail ropes shall not be lengthened or ^{Ropes not} repaired by splicing. *New.* ^{to be spliced}

CONSTRUCTION, SURFACE

565.—(1) In this section and in sections 566 to 596, <sup>Interpre-
tation,
ss. 565-596</sup>

- (a) “allowable unit stress” means the allowable unit stress assigned to the material by the issue that is current from time to time of the National Building Code of Canada or similar recognized authority, or in the absence of a recognized authority, by a professional engineer, based on good engineering practice;
- (b) “boom of a crane” means the projecting part of a crane from which the load is supported;
- (c) “constructor” means a person who contracts with the owner or agent of a project for the work thereon, and includes an owner or agent who,
- (i) contracts with more than one person for the work on a project, or
- (ii) undertakes the work on a project or any part thereof;
- (d) “excavation” means an excavation on a project, and includes a trench, other than a trench excavated for prospecting purposes;
- (e) “extension trestle ladder” means a self-supporting combination of a trestle ladder and a vertically-adjustable single ladder, with a suitable means for locking the ladders together;
- (f) “falsework” means the structural supports and bracing for forms;

- (g) "form" or "formwork" means the mould into which concrete is placed;
- (h) "framed structure" means a structure designed to act as a unit composed of members so connected to one another that a load applied to any member of it may alter the stresses induced in the other members, and includes a truss, a tubular metal frame and a column where the effective length is dependent upon the provision of lateral restraints between the ends of the column;
- (i) "ladder-jack" means a device attached to a ladder used for supporting a scaffold;
- (j) "life jacket" means a life jacket bearing a Department of Transport, Canada Approval Number for a body weight more than 90 lb.;
- (k) "life-net" means a net of adequate strength so placed and supported as to safely catch a person who might fall into it;
- (l) "means of egress" means a passageway, ramp, runway, stairway or ladder leading to an exit from a building, structure or excavation;
- (m) "outrigger scaffold" means a scaffold that is supported by rigid members cantilevered out from the structure to which they are anchored;
- (n) "project" means,
 - (i) a building or other structure that is being constructed, altered, repaired, demolished or moved, or
 - (ii) a roadway that is being built, altered, repaired, demolished or moved;
- (o) "recommended load" means the load established for a scaffold for the particular method of loading by a professional engineer based on the test loading of a tubular metal frame and its accessories and which shall not exceed one third of the failure load when the frame is tested by loading axially through the corner posts;

- (p) "stable slope" means the slope at which the wall of an excavation in soil will safely remain in place without extra support, during the time period when the walls of the excavation will be unsupported;
- (q) "subcontractor" means a person who contracts with a constructor for the work on part of a project and includes a person who contracts with a subcontractor for work on a part of the project;
- (r) "supplier" means an owner of any machine, vehicle, tool or other equipment who provides under any rental, leasing or other arrangement, such equipment for use by a person on a project;
- (s) "trestle ladder" means a self-supporting portable ladder, non-adjustable in length, consisting of two sections hinged at the top to form equal angles with the base.
- (2) Except where a contrary intent is provided, this section and sections 566 to 596 apply only to construction operations on the surface of a mining premises or at a plant. *New.* Application of ss. 565-596
- 566.—(1) The responsibilities of contractors and subcontractors on a project in connection with the requirements of this section and sections 566 to 573 are as prescribed in subsection 12 of section 169. Responsibility of contractors and subcontractors
- (2) No supplier shall provide any machine, vehicle, tool or equipment, or any part thereof, for use by a person on a project under any rental, leasing or other arrangement if such machine, vehicle, tool, equipment or part is in an unsafe condition. Machines to be in safe condition
- (3) Every constructor and every subcontractor shall appoint one or more competent persons to exercise direction and control over persons employed by him on each shift, and one such person may be himself. *New.* Shift bosses
567. Where one or more persons may be endangered by passing vehicular traffic on a road on a project, one or more of the following safeguards located at a Traffic control

suitable distance from the employees shall be provided as appropriate to give them adequate protection:

1. One or more flagmen.
2. Warning signs.
3. Barriers.
4. Lane control devices.
5. Flashing lights or flares. *New.*

Applica-
tion, alter-
native
methods
and
materials

568.—(1) In applying the requirements of sections 566 to 596,

- (a) the composition of an object; and
- (b) the size and arrangement of material of an object may vary from that prescribed, but only to the extent that the strength of the object and the safety of its use by persons is equal to or greater than the strength and safety as prescribed and where any conflict arises in the application of these sections as to whether the variation and composition of material of the object or the size and arrangement of material of the object is equal to that prescribed, an engineer's opinion prevails.

Idem

- (2) In applying subsection 1, the written opinion of the chief engineer takes precedence. *New.*

GENERAL

Capacity
to support
loads

569.—(1) During the construction, alteration, repair, dismantling, demolition or moving of a building or other structure, all parts thereof shall be,

- (a) capable of safely supporting the loads to which they may be subjected; or
- (b) adequately braced, either permanently or temporarily, to safely support the loads to which they may be subjected.

Lighting

- (2) All areas in which persons are present, and the means of access to and egress from such areas, shall be adequately lighted.

- (3) Every opening in a floor or other surface used by persons shall, ^{Protection of floor openings}

- (a) be protected by a guardrail; or
- (b) be covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

- (4) During construction of a building, temporary or permanent flooring shall, ^{Flooring}

- (a) be installed progressively so that the flooring will be provided prior to a person being required to work in a position exceeding two storeys above such flooring or three storeys where the vertical distance between column splices exceeds two storeys;
- (b) where used as a working surface, extend over the whole area except for necessary openings which shall be protected by a guardrail;
- (c) consist of material providing strength sufficient to support any load likely to be applied and at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a span of ten feet;
- (d) be securely fastened to and supported on girders, beams or other structural members capable of safely supporting the applied loads; and
- (e) not be required where the work is being done from a scaffold.

- (5) Overhead protection, at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a maximum span of ten feet shall be provided, ^{Overhead protection}

- (a) at every means of access to and egress from a building or other structure during construction or demolition where there is danger of material falling on a person;
- (b) above a scaffold, where there is danger of material falling on a person on the scaffold; and

- (c) above an area where a person is required to be directly below other work being done, and there is danger of material falling on the lower person.

Danger
signs

- (6) A sufficient number of signs bearing the word "DANGER" in clearly distinguishable lettering shall be posted,

- (a) where a covering prescribed by subsection 3 has been temporarily removed while work is being done which cannot be done with the covering installed;
- (b) where the installation of a guardrail is prescribed by the requirements of section 586, and the guardrail has temporarily been removed while work is being done which cannot be done with the guardrail installed;
- (c) adjacent to a hoisting area;
- (d) under a suspended scaffold; and
- (e) at the outlet end of a chute. *New.*

Damaged
structures

- 570.—(1) Where a structure has suffered damage likely to endanger the safety of a person by collapse of all or part of it, the structure shall be braced and shored or other measures taken to prevent injury to a person until the structure is demolished, dismantled, or repaired.

Idem

- (2) The bracing and shoring prescribed in subsection 1 shall be installed progressively so as to provide for the safety of persons installing the bracing and shoring. *New.*

Access and
egress from
work areas

- 571.—(1) Means of access to and egress from every excavation, floor, roof, platform and scaffold, other than a suspended scaffold, where work is being performed, shall,

- (a) be by a stair, runway, ramp or ladder; and
- (b) be maintained in a safe condition at all times.

Idem

- (2) Every means of access and egress prescribed by subsection 1 and every scaffold from which work is being performed shall,
- (a) be kept clear of obstructions;

- (b) be kept clear of ice, snow or other slippery materials; and
 - (c) when necessary to ensure firm footing, be sprinkled with sand or other suitable abrasive material.
- (3) When work on a building or other structure in which stairs are intended to be part of the permanent building or structure has progressed to two storeys or thirty feet above the lowest floor level, whichever is the lesser, the means of egress shall be by permanent or temporary stairs that shall,
- (a) be provided for the entire height from the lowest floor level to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and
 - (b) be continued as the height of the project is increased.
- (4) When work on a building or other structure intended to be 100 feet or more in height, and in which stairs are not intended to be part of the permanent building or structure, is in progress, the means of egress shall be by temporary stairs that shall,
- (a) be provided for the entire height from the ground to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and
 - (b) be continued as the height of the project is increased.
- (5) Subsections 3 and 4 do not apply to the means of egress from a skeleton structure.
- (6) Subsection 4 does not apply to a structure, including a chimney stack or pressure vessel, which has a permanent ladder attached to it as part of the

completed structure and the combined structure and ladder are fabricated before being raised into position as a unit. *New.*

Personal
protective
clothing,
equipment
and devices

572.—(1) No person shall be in an area where he might be exposed to injury from a noxious gas, liquid, fume or dust, or due to lack of oxygen unless he is suitably protected against the particular type of hazard.

Apparel

(2) Where the injury exposure referred to in subsection 1 is from skin contact with a noxious gas, liquid, fume or dust, the protection provided shall be,

(a) protective apparel; or

(b) protective skin cream suitable for the particular type of hazard.

Respirators

(3) Where the injury exposure referred to in subsection 1 is from inhalation of a noxious gas, fume or dust, or due to lack of oxygen, the protection provided shall be,

(a) adequate mechanical ventilation; or

(b) the wearing of respiratory equipment suitable for the particular type of hazard.

Safety belts

(4) A safety belt shall be used by a person on a structure where he is exposed to the danger of falling, and the nearest surface to which he might fall is more than ten feet below the place where he is working.

Idem

(5) The safety belt prescribed in subsection 4 shall be arranged so that if the person should fall he will be suspended at a distance of not more than five feet below the place where he was working.

Exceptions
to subss. 4, 5

(6) Subsections 4 and 5 do not apply,

(a) to a person using a means of access or egress;

(b) where a life-net is installed to provide equal protection; or

(c) to a person who is an erector engaged in connecting structural members of a skeleton structure or in gaining access thereto.

Life jackets

(7) Where a person may fall into water at a project with the risk of drowning, he shall wear a life jacket.

- (8) Subsection 7 does not apply to shallow water in which a life jacket cannot function properly. ^{Exception to subs. 7}
- (9) In addition to the life jacket prescribed in subsection 7, rescue equipment shall be provided in a suitable location near the project and, where practicable, shall consist of,
- (a) a boat in operating condition, equipped with,
 - (i) a ring buoy attached to fifty feet of three-eighths of an inch manila rope,
 - (ii) a boat hook, and
 - (iii) two or more life jackets to provide one for each of the persons needed to properly operate the boat; and
 - (b) where there is a current in the water, a line across the water to which there are attached floating objects capable of providing support for a person in the water.
- (10) In locations where the water is extremely rough or swift or where a manually operated boat is not practical, the boat prescribed in subsection 9 shall be a power boat suitable for the waters involved. ^{Idem}
- (11) Where this section applies, ^{Additional requirements}
- (a) two or more persons shall be designated and shall be immediately available to perform any necessary rescue operations;
 - (b) a suitable alarm system shall be provided; and
 - (c) the designated persons shall immediately commence rescue operations when the alarm is given. *New.*

PROJECT EXCAVATIONS

- 573.—(1) No excavation or trench shall be commenced until all gas, electrical and other services that are likely to endanger the safety of persons have been properly shut off and disconnected. ^{Services to be shut off}
- (2) No excavation shall be made that may endanger the persons on a project or the stability of an adjacent building or structure. ^{Stability of adjacent buildings}

Walls to be supported

- (3) The walls of an excavation shall be adequately supported by shoring and bracing, and where the excavation is a trench as defined in section 574, the requirements for shoring and bracing as defined therein apply.

Exceptions to subs. 3

- (4) Subsection 3 does not apply to the walls of an excavation,

- (a) less than four feet deep;
- (b) into which persons are not required to enter for any purpose;
- (c) cut in solid rock;
- (d) which have been cut and trimmed to a slope having not more than one foot of vertical rise to each foot of horizontal run;
- (e) which have been cut and trimmed to a slope steeper than that prescribed by clause *d*, and a professional engineer has certified in writing that the steeper slope is a stable slope which will not endanger persons; or
- (f) in which persons are not required to be within a horizontal distance of the walls equal to the height of the walls.

Walls to be scaled

- (5) The walls of an excavation shall be stripped of loose rock or other material which might slide, roll or fall upon persons below.

Flat area at top of walls

- (6) A clear and reasonably level area extending at least two feet back shall be maintained free of all materials at the top of the walls of an excavation.

Vehicles and machinery

- (7) No vehicle or other machinery shall be driven or operated or located so close to the edge of an excavation as to affect the stability of the walls of the excavation by vibration or otherwise and endanger the safety of any person.

Barriers

- (8) The top of the walls of an excavation shall be protected by an adequate barrier at least forty-two inches high if,

- (a) the depth of the excavation exceeds ten feet; and

- (b) the safety of a person can be endangered by falling into the excavation.
- (9) When a person is employed adjacent to or near an excavation which is not required to be protected by a barricade as prescribed by subsection 8, warning lights shall be provided and properly maintained from one-half hour before sunset until one-half hour after sunrise and at such other times as there is equally restricted visibility.
- (10) Every excavation shall be kept reasonably free of water at all times. *New.*
- 574.—(1) In this section and in section 575, “trench” means any excavation in the ground where the vertical dimension from the highest point of the excavation to a point level with the lowest point of the excavation exceeds the least horizontal dimension of the excavation, such dimensions being taken in a vertical plane at right angles to the longitudinal centre line of the excavation.
- (2) The requirements of this section for shoring and bracing the walls of a trench do not apply,
- (a) to a trench less than four feet deep;
 - (b) to a trench into which persons are not required to enter for any purpose;
 - (c) to a trench cut in solid rock;
 - (d) to a trench where the work therein is done only by the owner thereof in person; or
 - (e) to a part of a trench excavated for a pipeline or conduit if the trench is mechanically excavated, if the sections of the line or conduit are permanently assembled before being mechanically placed in the trench, and if the trench is mechanically back-filled.
- (3) The sides of all trenches exceeding four feet in depth shall be securely shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the top of the trench, except that where the district mining engineer gives permission in writing to the person in charge of the

work in connection with the trench, the shoring and timbering need not extend above the top of the trench.

Application

- (4) Subsection 3 does not apply where the trench is cut in solid rock or where the trench is excavated in hard and solid soil and does not exceed six feet in depth or where the sides of the trench are sloped to within four feet of the bottom of the trench so that the sloped sides of the trench do not have more than one foot of vertical rise to each foot of horizontal run.

Trench with sloping sides

- (5) Where the sides of a trench are sloped as described in subsection 4 but not to within four feet of the bottom of the trench, the vertical walls of the trench shall be shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the vertical walls and be fitted with toe-boards to prevent material rolling down the slope and falling into the part of the trench with vertical walls.

Drawings for shoring and timbering

- (6) Drawings and specifications for the shoring and timbering of all trenches to exceed thirty feet in depth and all trenches to exceed twelve feet in width shall be submitted in duplicate to the district mining engineer and the trench shall not be commenced until the drawings and specifications have been approved by the engineer and the shoring and timbering shall conform to such approved plans.

When shoring and timbering to be done

- (7) Shoring and timbering shall be carried along with the excavating of a trench but when conditions permit may be done before the excavating commences.

Removal of shoring

- (8) Where the shoring and timbering is to be removed on completion of the other work in a trench, such removal shall be done by or under the personal supervision of a person experienced in removing shoring and timbering.

Ladders to be provided

- (9) Ladders or other means of escape satisfactory to the district mining engineer shall be provided in every trench and such ladders or other means of escape shall be spaced at intervals of not more than fifty feet in each trench and shall extend above the top of the trench.

- (10) Where staging or scaffolding for handling by hand ^{Staging and scaffolding} in relays materials excavated from the trench is erected independently of the shoring or timbering on the sides of the trench, it shall be structurally adequate to protect persons working thereon or in the trench from collapse of the staging or scaffolding or from falling objects.

- (11) Where the staging or scaffolding is attached to the ^{Idem} shoring and timbering on the sides of the trench, the shoring and timbering shall be sufficiently reinforced to withstand the additional load thereby imposed on the shoring and timbering. *New.*

575.—(1) In this section, <sup>Interpre-
tation</sup>

(a) “cleat” means a short member of shoring and timbering that directly resists the downward movement of a strut or wale;

(c) “sheathing” means the vertical members of shoring and timbering that directly resist pressure from the side of a trench;

(d) “strut” means a transverse member of shoring and timbering that directly resists pressure from sheathing or wales;

(e) “wale” means a longitudinal member of shoring and timbering that directly resists pressure from sheathing.

(2) In all methods of shoring and timbering of a trench, <sup>Methods of
shoring and
timbering
trenches</sup>

(a) the sheathing shall be placed against the side of the trench so that the length of each piece of sheathing is vertical;

(b) the struts shall be horizontal and at right angles to the wales or sheathing supported thereby; and

(c) the wales shall be parallel to the bottom or the proposed bottom of the trench.

(3) The sheathing shall be held securely in place against ^{Sheathing} the wales or, where wales are not used, the struts by pressure being firmly exerted on the side of the sheathing adjacent to the wall of the trench.

Idem

(4) Where the trench is excavated in,

(a) loose, sandy or soft soil;

(b) soil that has been previously excavated; or

(c) soil under hydrostatic pressure,

each piece of sheathing shall be driven into the bottom of the trench so as to be firmly held in place.

Struts

(5) Each strut shall be,

(a) cut to the proper length required to fit it tightly between,

(i) the wales, or

(ii) where wales are not used, the sheathing,

supported by the strut; and

(b) where necessary, held securely in place by wedges driven between the strut and,

(i) the wales, or

(ii) where wales are not used, the sheathing,

supported by the strut.

Idem

(6) Each strut shall,

(a) have,

(i) cleats that extend over the wales supported by the strut, or

(ii) other similar devices,

attached securely to the strut by spikes or bolts; or

(b) be placed on,

(i) cleats spiked or bolted to posts supporting wales, or

(ii) where wales are not used, cleats or other similar devices spiked to the sheathing.

- (7) Each wale shall be supported, Wales
- (a) on cleats spiked to the sheathing; or
 - (b) by posts set on,
 - (i) the wale next below it, or
 - (ii) in the case of the lowest wale, the bottom of the trench.
- (8) The composition of materials used for shoring and timbering shall be, Composition of materials
- (a) structural Eastern Spruce; or
 - (b) any other structural material having strength equal to or greater than that prescribed in clause *a*.
- (9) Each member used for shoring and timbering shall Members be a solid piece of material.
- (10) Where wales are used in the shoring and timbering Wales in trenching of a trench, the smaller dimension of the wales shall be placed against the sheathing.
- (11) The composition of materials used for shoring and timbering may vary from that prescribed in clause *a* of subsection 8, and the size, composition and arrangement of materials used for shoring and timbering may vary from that prescribed in subsection 16, but only to the extent that the strength of the shoring and timbering is equal to, or greater than, the strength of the shoring and timbering prescribed in subsection 16. Composition of materials
- (12) Where two or more pieces of sheathing are used one Arrangement of sheathing above another in the shoring and timbering of a trench, the sheathing shall be arranged so that the lower pieces of sheathing,
- (a) overlap the lowest wales supporting the pieces of sheathing next above it; and
 - (b) are firmly driven into the soil and securely supported by wales and struts as the trench is made deeper.

Trench-jacks
and
trench-braces

- (13) Subject to subsection 14, in the shoring and timbering of a trench, a trench-jack or trench-brace may be used in place of a strut prescribed by this requirement, but only if the strength of the trench-jack or trench-brace is equal to, or greater than, the strength of the strut.

Idem

- (14) Where the trench is over four feet in width, a trench-jack or trench-brace that contains a metal pipe-spacer shall not be used.

Wedges

- (15) Where a wedge is used in the shoring and timbering of a trench, the thick end of the wedge shall be at least two inches wide.

Where
shoring and
timbering is
structural
Eastern
Spruce

- (16) Where the material used for shoring and timbering is that prescribed by clause *a* of subsection 8, the size and arrangement of materials used for shoring and timbering shall be as prescribed in,

(a) table 1 for hard and solid soil;

(b) table 2 for soil that may crack or crumble;

(c) table 3 for loose, sandy or soft soil, or soil that has been previously excavated; or

(d) table 4 for soil under hydrostatic pressure,

for depths of trenches shown in column 1 of the tables and shall have,

(e) the pieces of sheathing,

(i) with a thickness and width not less than that prescribed in column 2, and

(ii) arranged so that the horizontal spacing from the centre of one piece of sheathing to the centre of the next piece of sheathing on the same side of the trench is not greater than the spacing prescribed in column 3;

(f) the wales,

(i) with a thickness and width not less than that prescribed in column 4, and

- (ii) arranged so that the vertical spacing from the centre of one wale to the centre of the next wale is not greater than the spacing prescribed in column 5; and
- (g) the struts,
- (i) with a thickness and width not less than that prescribed in column 6, where the trench is six feet or less in width, or with a thickness and width not less than that prescribed in column 7, where the trench is twelve feet or less in width but greater than six feet in width,
 - (ii) arranged so that the vertical spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 8, and
 - (iii) arranged so that the horizontal spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 9.

TABLE 1
(For hard and solid soil)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 6 but not over 10	2 x 8	6	.....	.....	4 x 4	4 x 6	4	9
2	Over 10 but not over 15	2 x 8	4½	6 x 6	4	4 x 6	6 x 6	4	9
3	Over 15 but not over 20	2 x 8	3	8 x 8	4	6 x 6	6 x 6	4	9
4	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
5	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 2
(For soil that may crack or crumble)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 8	4½	4 x 6	4	4 x 4	.....	4	9
2	Over 7 but not over 10	2 x 8	3	6 x 6	4	4 x 4	6 x 6	4	9
3	Over 10 but not over 15	2 x 8	1	6 x 8	4	4 x 6	6 x 6	4	9
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	8 x 8	4	9
5	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
6	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 3
(For loose, sandy or soft soil or soil that has been previously excavated)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet								
1	Over 4 but not over 7	Inches 2 x 8	Feet 1½	Inches 4 x 6	Feet 4	Inches 4 x 4	Inches 4 x 6	Feet 4	Feet 9
2	Over 7 but not over 10	2 x 6	Width of member	6 x 8	3	4 x 6	6 x 6	3	9
3	Over 10 but not over 15	2 x 6	Width of member	8 x 8	4	6 x 6	6 x 6	4	9
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	6 x 8	4	9
5	Over 20 but not over 25	3 x 8	Width of member	8 x 10	4	6 x 8	8 x 8	4	9
6	Over 25 but not over 30	3 x 8	Width of member	10 x 10	4	8 x 8	8 x 8	4	9

TABLE 4
(For soil under hydrostatic pressure)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 6	Width of member	6 x 8	4	4 x 4	6 x 6	4	9
2	Over 7 but not over 10	2 x 6	Width of member	6 x 10	3	4 x 6	6 x 6	3	9
3	Over 10 but not over 15	3 x 8	Width of member	10 x 10	3½	6 x 6	6 x 6	3½	9
4	Over 15 but not over 20	3 x 8	Width of member	10 x 12	3½	8 x 8	8 x 8	3½	9
5	Over 20 but not over 25	4 x 8	Width of member	10 x 14	3	8 x 8	8 x 10	3	9
6	Over 25 but not over 30	4 x 8	Width of member	14 x 14	3	8 x 10	10 x 10	3	9

New.

HOUSEKEEPING

- | | |
|------------------|--|
| Tools | 576.—(1) No tool or other object shall be placed where it may endanger a person. |
| Formwork ties | (2) Formwork ties protruding from concrete shall be removed or cut off at the surface of the concrete as soon as is practicable after removal of the formwork. |
| Protruding nails | (3) Protruding nails in lumber or scrap material shall be removed or bent so as not to be a source of danger to persons. |
| Debris | (4) Waste material and debris on a project shall be removed to a suitable disposal area as often as necessary to prevent a hazardous condition, but not less frequently than daily. |
| Rubbish | (5) Rubbish, debris and other materials shall, <ul style="list-style-type: none"> (a) not be permitted to fall freely from one level to another; and (b) be lowered by a chute or in a suitable container. |
| Idem | (6) Large objects of rubbish, debris or other similar material shall be lowered by crane, hoist or other suitable means. |
| Idem | (7) Subsections 5 and 6 do not apply to a demolition project where material falls or is dropped into a designated area which is adequately enclosed and to which persons do not have access. |
| Chutes | (8) Every chute shall, <ul style="list-style-type: none"> (a) be well constructed and rigidly fastened; (b) if at more than 45 degrees to the horizontal, be enclosed on four sides; (c) where of the open type, be inclined at an angle of 45 degrees or less to the horizontal; and (d) have a strong gate at the bottom end where necessary to control the flow of material from the chute. |

(9) The entrance to a chute shall,

Idem

- (a) be so constructed as to prevent hazardous overspill when rubbish, debris or other materials are being deposited into the chute;
- (b) have 4-inch by 4-inch or larger curb or cleat where the entrance is at or below the floor level;
- (c) be not more than four feet high; and
- (d) be kept closed when not in use. *New.*

STORAGE OF MATERIALS

577.—(1) Material to be used on or removed from a ^{Handling} project, _{of materials}

- (a) shall be stored in an orderly manner and so as not to endanger the safety of persons;
 - (b) when being moved or transported on the project, shall be moved only in such a manner that the material cannot endanger the safety of persons; and
 - (c) when it is to be off-loaded from a vehicle or stockpile, shall not have any blocking or binder that is required to maintain the material in a safe position removed until the removal of the blocking or binder will not allow the material to shift and endanger the safety of persons.
- (2) Building materials or equipment shall not be placed ^{Storage} or stored on a permanent or temporary structure so _{of materials} as to exceed the safe loadings of the structure or any part thereof.
- (3) No building material shall be stored, stacked or ^{*Idem*} piled within six feet of,
- (a) a floor or roof opening;
 - (b) the open edge of a floor, roof or balcony; or
 - (c) an excavation.

Masonry
units

- (4) Subsection 3 does not apply to small masonry units, including bricks and blocks, which can be handled by one person and the material is,

(a) to be used at the edge of,

(i) a floor,

(ii) a roof,

(iii) an opening in a floor, or

(iv) an opening in a roof; and

(b) the height of the pile is less than the distance of the pile from the edge described in clause a.

Storage of
lumber,
steel, etc.

- (5) Lumber, structural steel and similar materials shall be stored so that the pile is secure against collapsing or tipping.

Idem,
lumber

- (6) A pile of lumber more than four feet high shall have cross pieces to provide stability.

Masonry
units when
stacked

- (7) Masonry units shall be stacked,

(a) on level wooden planks, a platform or other level base;

(b) in tiers throughout a pile;

(c) so that a vertical face of a pile is not over seven feet in height;

(d) when the pile is more than seven feet in height, by progressively stepping the pile back from the vertical faces;

(e) when the pile is more than seven feet in height, with wood strips between tiers to provide stability; and

(f) with header units in the pile where necessary to provide stability.

Bagged
material

- (8) Bagged material shall be,

(a) piled with cross-piles on the exterior of the pile to prevent movement of the bags;

- (b) piled not more than ten bags high at a vertical face of a pile, except where the pile is in a storage bin or enclosure and the face of the pile is supported by the walls of the storage bin or enclosure; and
 - (c) removed from a pile so that the top of the pile is kept approximately level.
- (9) Pipe and reinforcing steel shall be stacked in substantially supported and braced racks or frames unless some other provision is made to prevent their movement. ^{Pipe and steel}
- (10) No flammable liquid in excess of one day's supply in safe containers shall be stored in a building or structure except in a room with sufficient window area to provide explosion relief to the outside and which is separated from the means of egress from the building or structure. ^{Flammable liquids}
- (11) A container for a combustible (other than a fuel), corrosive or toxic substance shall, ^{Containers}
- (a) be suitable for the particular substance; and
 - (b) be clearly labeled to identify,
 - (i) the substance,
 - (ii) the hazard involved in the use of the substance, and
 - (iii) the safeguards and protective measures to be taken by persons before, during and after using the substance.
- (12) A container for a fuel shall be identified as to content. ^{Fuel containers}
New.

SANITATION

- 578.—(1) An adequate supply of potable water shall be kept readily accessible for persons. ^{Drinking water}
- (2) The potable water shall be supplied from a piping system or from a clean, covered container having a drain faucet. ^{Idem}
- (3) No person shall be required to, or shall, use a dipper or drinking cup in common with another person. ^{Drinking cups}

Toilet
facilities

- (4) Adequate flush toilets, chemical toilets or privies shall be provided or made available for the use of persons from the start of the project,
- (a) within reasonably easy access of their place of work; and
 - (b) so that there is at least one toilet or privy for every thirty or fewer persons on the project at any one time.

Idem

- (5) Every flush toilet, chemical toilet or privy shall,
- (a) be constructed so that any user is sheltered from view and protected from the weather and from falling objects;
 - (b) have natural or artificial illumination;
 - (c) be provided with adequate supplies of toilet paper and disinfectant;
 - (d) be maintained in a clean and sanitary condition;
 - (e) be equipped with a toilet seat and cover; and
 - (f) if portable, be equipped with a urinal trough in addition to the toilet or privy.

Washing
facilities

- (6) Washing facilities with adequate clean water, soap and individual towels or other drying equipment shall be provided for persons who use or handle corrosive, poisonous or other substances likely to endanger their safety. *New.*

FIRE PROTECTION

Fire
extinguishers

- 579.—(1) Fire extinguishing equipment shall be provided where risk of fire exists that is,
- (a) suitable as to type and size for combatting the likely fire;
 - (b) protected from mechanical injury;
 - (c) located for easy access at suitably marked stations;
 - (d) maintained in good operating condition, and
 - (e) protected from freezing.

- (2) Where a permanent standpipe is to be installed in a ^{Standpipes} building, it shall,
- (a) be installed progressively, so far as is practicable, as the building construction proceeds;
 - (b) be provided with a valve at each hose outlet;
 - (c) have a 1½-inch diameter hose, with a combination straight stream and fog nozzle, connected to the valve at each hose outlet and shall be installed in all storeys in such locations that each portion of the building is protected by means of hose not over seventy-five feet in length;
 - (d) where applicable, have a suitable connection for the municipal fire department located on the street side not more than three feet and not less than one foot above grade and clear and easy access to the connection shall be maintained at all times; and
 - (e) be provided with adequate water pressure.
- (3) A fire extinguisher shall, ^{Fire extinguishers}
- (a) be recharged immediately after use and returned to its designated position;
 - (b) be inspected at least monthly and the date of the last inspection recorded on it; and
 - (c) not contain carbon tetrachloride, methyl bromide or other toxic vapourizing liquids.
- (4) At least one water-type fire extinguisher of a stored ^{Water-type fire extinguishers} pressure, cartridge operated or pump tank type, having a capacity of two Imperial gallons, shall be provided,
- (a) in every workshop;
 - (b) in every storage building for combustible materials;
 - (c) in places where welding or flame-cutting operations are carried on, while the operations are being carried on and for a reasonable time after their conclusion; and

- (d) on each storey having a floor space of 5,000 sq. ft. or less in an enclosed building being constructed or altered, and an additional fire extinguisher for each additional 5,000 sq. ft. of floor space in the storey or any fraction thereof.

Exception
as to
clause d

- (5) Clause d of subsection 4 does not apply to a single storey building without a basement or cellar.

Dry
chemical
fire
extinguishers

- (6) One or more dry chemical fire extinguishers, the contents of which are discharged under pressure and with a capacity of at least four pounds or other equally effective extinguishers shall be provided,

(a) where flammable liquids are stored or handled;

(b) where oil-fired or gas-fired equipment is used;
and

(c) where a tar or asphalt kettle is used. *New.*

ELECTRICAL, WELDING, AND HAULAGE REQUIREMENTS DURING CONSTRUCTION

Electrical
equipment

- 580.—(1) Electrical equipment and wiring methods used during the construction period shall comply with the electrical requirements of this Part.

Welding
and
burning

- (2) Where welding and burning is done during the construction period, the requirements of section 248 apply.

Haulage

- (3) Where haulage equipment is used during the construction period, the requirements of sections 238 to 240 apply. *New.*

TEMPORARY HEAT

Fuel-fired
heating
devices

- 581.—(1) A fuel-fire heating device shall,

(a) be so located, protected and used that it will not risk the ignition of,

(i) a tarpaulin or similar temporary enclosure, or

(ii) adjacent wood or other combustible materials;

- (b) be used only in a confined or enclosed space where there is provided,
 - (i) an adequate supply of air for combustion, and
 - (ii) adequate general ventilation of the space;
- (c) be located so as to be protected from damage or overturning;
- (d) not be located in or adjacent to a means of egress; and
- (e) when used to burn a solid fuel, be connected by a securely supported sheet metal pipe to discharge properly the products of combustion outdoors.

(2) Fuel supply lines shall be protected from damage. Fuel supply lines

(3) Temporary steam piping shall be, Temporary steam piping

- (a) installed properly and supported securely; and
- (b) insulated or protected by screens or guards where persons may accidentally come into contact with the piping. *New.*

CONSTRUCTION EQUIPMENT

582.—(1) Vehicles, machinery, tools and equipment used on a project, Vehicles, machinery, tools, etc.

- (a) shall be in such condition that when used they will not endanger persons;
- (b) shall not be used while being repaired or serviced;
- (c) shall, when operated by motive power, have been inspected by an authorized person at least once in the twenty-four hours prior to their use;
- (d) shall, when applicable, have a safe means of access to the operator's station; and
- (e) shall have at least the same factor of safety as the original design for all modifications, extensions, replacement parts or repairs.

- | | |
|---------------------------------------|---|
| Operators of
motorized
vehicles | (2) No person shall operate a motorized vehicle unless he is authorized to do so. |
| Exception | <p>(3) Subsection 2 does not apply to a person,</p> <p style="padding-left: 40px;">(a) who is under instruction in the operation of the vehicle; and</p> <p style="padding-left: 40px;">(b) who is accompanied by a person who is authorized to operate a motorized vehicle.</p> |
| Moving
supports | <p>(4) No person shall be on a moving support, including a platform, bucket, basket, load, hook or sling, supported by,</p> <p style="padding-left: 40px;">(a) the boom of a crane or other similar hoisting machine; or</p> <p style="padding-left: 40px;">(b) a fork-lift truck, front-end loader or other similar machine.</p> |
| Exception | <p>(5) Subsection 4 does not apply to,</p> <p style="padding-left: 40px;">(a) a bucket or basket attached to a hydraulic-powered machine on which the operating controls are on the bucket or basket and the machine is equipped with a fail-safe device which automatically locks the support in position; and</p> <p style="padding-left: 40px;">(b) the platform of an approved device for hoisting persons.</p> |
| Hoisting
hooks | (6) All hoisting hooks shall be equipped with a safety catch. |
| Exception | (7) Subsection 6 does not apply to hoisting hooks while being used in the placing of structural members when the method of placing is such that persons are as safe as if a safety catch were installed. |
| Friction-
type
clamps | (8) Friction-type clamps used in hoisting materials shall be so constructed that the accidental slackening of the hoisting cable does not release the clamp. |
| Balloons,
etc. | (9) Where hoisting is done by a device in which the weight of the load is not transferred to ground support at all times, such as by a balloon or helicopter, written permission shall be obtained from an engineer prior to hoisting. |

- (10) A crane shall be equipped with a boom, Cranes
- (a) authorized by the manufacturer; or
 - (b) designed by a professional engineer and fabricated in accordance with the requirements of his design.
- (11) Manufacturers' load-rating plates shall be attached Load-rating plates to all cranes in clear view of the operator and shall contain sufficient information to enable the operator to determine the safe load which can be hoisted by the crane under any conditions.
- (12) Where the boom of a crane is other than that Idem authorized by the manufacturer, the load-rating plate shall be in accordance with information supplied by a professional engineer.
- (13) Where a person may be endangered by the rotation Guide ropes or uncontrolled motion of a load being hoisted by a crane or similar machine, one or more guide ropes or tag lines shall be used to prevent the rotation or other uncontrolled motion.
- (14) When the operator of a crane, shovel or similar machine has his view of the path of travel of any Where signalmen required part of the machine or its load obstructed, one or more competent signalmen shall assist him by keeping the part of the machine or its load under observation and communicating with the operator by adequate visual signals, or where this is impracticable, by a suitable telecommunication system.
- (15) While a section of a pipeline or hose is under pressure, Repairs to pipeline no person shall commence to disconnect or carry out any repairs on that section.
- (16) A hose supplying steam or air to the hammer of a Pile drivers supply hoses pile driver shall have attached to it a wire rope or chain to prevent the hose from whipping if the hose becomes separated from the hammer.
- (17) Every lifting jack shall, Lifting jacks
- (a) have its rated capacity legibly cast or stamped in plain view on the jack; and
 - (b) be equipped with a positive stop to prevent over-travel or with an indicator where a positive stop is impracticable.

Piles

- (18) During the hoisting, placing, removal or withdrawal of piles or sheet-piling, they shall be adequately supported at all times and all persons not actually engaged in the operation shall be kept from the area.

Internal combustion engines

- (19) No internal combustion engine shall be operated,

- (a) in an excavation unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate in the excavation; or
- (b) in an enclosed building or other enclosed structure unless,
 - (i) the exhaust gases and fumes are discharged directly to outdoors to a point sufficiently remote to prevent their return, or
 - (ii) there is an adequate supply of air for combustion and adequate mechanical exhaust ventilation. *New.*

SPECIAL PROVISIONS

Excavations for wells

583.—(1) Where the walls of an excavation for a well are not supported as prescribed by subsection 3 of section 573, no person shall enter or remain in the excavation if it is over four feet in depth, unless,

- (a) a steel liner of adequate strength has been installed which,
 - (i) extends two feet above ground level and to within four feet of the point where the work is being done,
 - (ii) is adequately supported on two sides by steel wire rope, and
 - (iii) is such that the difference between the diameter of the excavation and the diameter of the liner does not exceed four inches; and

- (b) the person,

- (i) works from within the steel liner,

- (ii) is wearing a safety harness the rope of which is secured at the surface, and
 - (iii) is attended by another person who is stationed outside the excavation.
- (2) No person shall enter a confined space where the ^{Confined spaces} means of egress is restricted, unless,
- (a) the space has been tested to ascertain if a hazard exists;
 - (b) adequate precautions as prescribed by these requirements have been taken against any hazard found to exist;
 - (c) he is attended by another person stationed outside the confined space; and
 - (d) suitable arrangements have been made to remove the person from the confined space if he requires assistance, and where practicable, these arrangements shall include his use of a safety harness or safety belt.
- (3) During rock drilling operations, an adequate supply ^{Rock drilling operations} of water shall be provided where necessary to control the dissemination of dust into the breathing zone of persons in the area who are not protected as required by subsection 3 of section 572.
- (4) Where explosives are used on a project, sections 279 ^{Explosives} to 310 apply. *New.*

RUNWAYS, RAMPS, PLATFORMS

- 584.—(1) A runway, ramp or platform, other than a ^{Runways etc.} scaffold platform shall be,
- (a) designed, constructed and maintained to safely support all loads that may reasonably be expected to be applied to it;
 - (b) nineteen inches or more in width; and
 - (c) securely fastened in place.
- (2) A ramp shall have, Ramps
- (a) a slope not exceeding one foot of vertical rise to each three feet of horizontal run; and

(b) cross cleats if the slope exceeds one foot of vertical rise to each eight feet of horizontal run, and the cleats shall be,

(i) spaced at regular intervals not exceeding eighteen inches, and

(ii) of equivalent strength and have equivalent resistance to slipping as one inch by two inch dressed boards securely nailed to the ramp.

Exception

(3) Subsection 2 does not apply to a ramp installed in the stairwell of a building not exceeding two storeys in height, but every such ramp shall have,

(a) a slope not exceeding one foot of vertical rise to one foot of horizontal run; and

(b) cross cleats,

(i) spaced at regular intervals not exceeding twelve inches, and

(ii) of equivalent strength and have equivalent resistance to slipping as two inch by two inch dressed boards securely nailed to the ramp. *New.*

LADDERS

Ladders

585.—(1) A ladder shall,

(a) be designed, constructed, maintained and used so as not to endanger the safety of any person;

(b) be used only in such a way that the loads applied do not cause the materials used in any part of the ladder to be stressed beyond the allowable unit stresses for the materials used;

(c) be free from broken or loose members or other faults;

(d) have rungs evenly spaced twelve inches on centres;

(e) have side rails not less than twelve inches apart;

- (f) be placed on a firm footing;
- (g) be held in place by one or more persons while being used, if it exceeds thirty feet in length and is not securely fastened;
- (h) when not securely fastened, be placed so that the base of the ladder is not less than one quarter and not more than one third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder;
- (i) if used as a regular means of access between floors,
 - (i) be securely fastened in place,
 - (ii) extend at least three feet above every landing or floor,
 - (iii) have a clear space of four inches behind any rung, and
 - (iv) be so located that an adequate landing surface, clear of obstructions, is available at the top and bottom of the ladder;
- (j) not be in an elevator shaft or hoistway when such space is being used for hoisting; and
- (k) not be lashed to another ladder to increase its length.

(2) A wooden ladder shall,

Wooden
ladders

- (a) consist of wood that is straight-grained and free from loose knots, sharp edges, splinters and shakes;
- (b) not be painted or coated with an opaque material; and
- (c) have rungs of clear straight-grained material that is free of knots.

(3) A wooden ladder of the cleat type shall have,

Wooden
cleat-type
ladders

- (a) side rails,

- (i) not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches for ladders up to and including nineteen feet long, and
- (ii) not less than $1\frac{5}{8}$ inches by $5\frac{5}{8}$ inches for ladders over nineteen feet long; and

(b) cleats or rungs,

- (i) not less than five eighths of an inch by $2\frac{5}{8}$ inches, and
- (ii) braced by filler blocks between the cleats or rungs.

Double
width
ladders

(4) A double width ladder shall,

- (a) have three rails evenly spaced;
- (b) be not less than five feet in width;
- (c) have cleats or rungs that extend the full width of the ladder; and
- (d) be securely fastened in place.

Maximum
lengths of
ladders

(5) The maximum length of a ladder measured along the side rail shall be,

- (a) 16 feet for a trestle ladder, a base section of an extension trestle ladder, or an extension section of an extension trestle ladder;
- (b) 20 feet for a step ladder;
- (c) 30 feet for a single ladder or individual section of a ladder;
- (d) 48 feet for a two-section extension ladder; and
- (e) 66 feet for an extension ladder having more than two sections.

Runs of
ladders

(6) Runs of ladders shall,

- (a) have rest platforms at intervals not greater than thirty-five feet; and
- (b) be offset at every rest platform to provide overhead protection.

- (7) Subsection 6 does not apply to a permanently installed ladder which is provided with a safety cage over its entire length. ^{Exception}
- (8) When a step-ladder is being used as a self-supporting unit, ^{When ladder used as a self-supporting unit}
- (a) the legs shall be fully spread and the spreader shall be locked;
 - (b) the top of the step-ladder shall not be used as a step; and
 - (c) the pail shelf shall not be used as a step.

STAIRS

- (9) Temporary stairs and landings shall be designed and constructed to safely support a live load of 100 pounds per square foot. ^{Temporary stairs and landings}
- (10) Stairs shall, ^{Requirements for stairs}
- (a) have treads and risers uniform in width, length and height in any one flight;
 - (b) have stringers making an angle not exceeding fifty degrees from the horizontal;
 - (c) have a vertical distance between landings not exceeding twelve feet; and
 - (d) have a handrail equivalent to the top-rail of a guardrail as prescribed in these requirements securely fastened and supported in place on the open side or sides of each flight and at each landing.
- (11) Temporary stairs shall have a clear width of not less than thirty inches. ^{Temporary stairs}
- (12) Skeleton steel stairs shall have temporary wooden treads, ^{Skeleton steel stairs}
- (a) of suitable planking extending the full width and breadth of the stairs and landings; and
 - (b) securely fastened in place.

Exception

(13) Clause *b* of subsection 10 and subsection 11 do not apply to a prefabricated stair erected inside a tower formed by scaffold frame sections where,

- (a) the stringers make an angle not exceeding sixty degrees from the horizontal; and
 - (b) the stairs have a clear width of twenty inches.
- New.*

GUARDRAILS

Where
guardrails
required

586.—(1) A guardrail shall be provided and maintained in good condition,

- (a) around any uncovered opening in a floor, roof or other surface; and
 - (b) at the perimeter or any other open side of,
 - (i) a floor, including a mezzanine and a balcony,
 - (ii) a surface of a bridge,
 - (iii) a scaffold, including a platform, runway or ramp, or
 - (iv) a concrete roof, while the formwork remains in place,
- from which a person may fall,
- (v) into water,
 - (vi) for a vertical distance of four feet or more where the scaffold referred to in subclause iii of clause *b* is used for wheelbarrows or other vehicles, or
 - (vii) for a vertical distance of ten feet or more.

Require-
ments for
guardrails,
height

(2) A guardrail shall have a height of not less than thirty-six inches and not more than forty-two inches above the surface, floor, scaffold or concrete roof on which it is installed.

Idem
specifica-
tions

(3) A guardrail shall be constructed in accordance with one of the following specifications:

1. A wooden guardrail, free from splinters and protruding nails, consisting of,
 - i. a top rail not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, securely supported on posts not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, spaced at intervals of not more than eight feet,
 - ii. an intermediate rail not less than three inches wide, securely fastened to the inner side of the post midway between the top rail and the toe-board, and
 - iii. a toe-board securely fastened to the posts or other vertical supports, and extending from the surface, floor, scaffold or roof, to a height of not less than five inches;
2. A wire cable guardrail maintained taut by means of a turnbuckle consisting of,
 - i. a top-rail and an intermediate rail of not less than one-half of an inch diameter wire cable with vertical separators at least two inches wide, spaced at intervals of not more than eight feet, and
 - ii. a toe-board securely fastened to the inner side of the vertical separators and extending from the surface, floor, scaffold or roof to a height of not less than five inches; or
3. Notwithstanding the height limitations of subsection 2, a guardrail of fencing material, commonly referred to as snow fencing, adequately supported in a vertical position and maintained taut, which shall have,
 - i. vertical pieces of lumber four feet long, not less than one and one-half inches wide and three-eighths of an inch thick, painted a distinctive colour, and woven between five double strands of number thirteen Imperial Standard Gauge steel wire so that the lumber shall be tight

between the wire and space at not more than three and one half inches centre to centre, and

- ii. the double stranded wires shall be wrapped round each other at least three times in each space between the lumber and shall be evenly spaced ten inches apart.

Guardrails

- (4) A guardrail shall be constructed in accordance with paragraph 1 of subsection 3 if the district mining engineer is of the opinion that the wire cable guard-rail or fencing material is not installed or is not being maintained in good condition. *New.*

SCAFFOLDS

Where scaffolds required

- 587.—(1) Where work cannot be done safely on or from the ground or from a building or other permanent structure, a scaffold constructed as prescribed in this section, or some other equally safe means of support for persons, shall be provided.

Use of loose objects prohibited

- (2) No person shall use stilts, a barrel, box or other loose object,
 - (a) to stand upon while working; or
 - (b) to support a scaffold or working platform.

Supervision required

- (3) The erection, use, dismantling or removal of a scaffold shall be done under the supervision of a person experienced in this work.

Carrying on of work

- (4) During the erection, alteration or dismantling of a scaffold or scaffold platform, work, other than that required for the erection, alteration or dismantling,
 - (a) shall be done only from the parts of the scaffold or scaffold platform which comply with subsection 1 of section 586 and subsection 5 of this section; and
 - (b) shall not be performed beneath the part being erected, altered or dismantled unless adequate overhead protection is provided.

Requirements for scaffolds

- (5) A scaffold shall,
 - (a) be capable of supporting two or more times the maximum loading to which it may be

subjected without exceeding the allowable unit stresses for the materials used and where the principal component of the scaffold is a tubular metal frame;

- (b) be constructed only of suitable structural material and where lumber is used, it shall be No. 1 Construction Grade Eastern Spruce or better;
- (c) have all uprights diagonally and horizontally braced to prevent lateral movement;
- (d) have no splices between the points of support of horizontal members;
- (e) have footings, sills or supports which shall be sound, rigid, and capable of supporting the maximum load without unsafe settlement or deformation;
- (f) have all necessary fittings and gear, which shall be suitable and properly installed;
- (g) have safety catches on all hooks; and
- (h) be adequately secured to prevent lateral movement at vertical intervals not exceeding three times the least lateral dimension of the scaffold measured at the base.

(6) A scaffold platform shall,

Require-
ments for
scaffold
platforms

- (a) be designed, constructed and maintained to safely support all loads to be applied to it in accordance with clause *a* of subsection 5;
- (b) be at least nineteen inches wide;
- (c) when ten or more feet above a floor, roof or other surface, consist of planks tightly laid for the full width of the scaffold; and
- (d) when lumber is used, have planks which,
 - (i) are of No. 1 Construction Grade Eastern Spruce or better,
 - (ii) are at least two inches thick and ten inches wide,

- (iii) overhang its end supports by not less than six inches and not more than eighteen inches, and
- (iv) are cleated or otherwise secured against slipping.

Require-
ments for
suspended
scaffolds

(7) A suspended scaffold shall,

- (a) be attached to a fixed support or an out-rigger beam capable of supporting four or more times the maximum loading to which it may be subjected, without overturning and without exceeding the allowable unit stresses for the materials used;
- (b) have hangers located not less than six inches and not more than eighteen inches from the ends of the platform;
- (c) when capable of moving either vertically or horizontally,
 - (i) have rope falls equipped with suitable pulley blocks, or
 - (ii) have a mechanical hoisting device equipped with a positive locking device to prevent the scaffold from falling freely;
- (d) not use fibre rope where,
 - (i) the distance between blocks exceeds three hundred feet,
 - (ii) any corrosive substance is in the vicinity of the rope, or
 - (iii) any mechanical grinding or flame cutting equipment is to be used in the vicinity of the rope;
- (e) when not being raised or lowered, where practicable, be secured to and firmly anchored to the building or structure; and
- (f) have wire mesh of at least No. 16 gauge rejecting a ball one and a half inches in diameter, extending from the toe-board to the rail of the guardrail and fastened securely in place.

(8) A boatswain's chair shall,

Boatswain's
chair

- (a) be not less than two feet long and ten inches wide;
- (b) be supported by a sling which shall be at least three-eighths of an inch wire rope, if the workman on the chair is using,
 - (i) any corrosive substance, or
 - (ii) any mechanical grinding or flame cutting equipment; and
- (c) not be required to comply with clauses *b* and *f* of subsection 7.

- (9) Each person on a suspended scaffold shall use a ^{Safety belts} safety belt attached in a satisfactory manner to a separate independently suspended life-line of at least five-eighths of an inch manila rope securely attached overhead to the project or other suitable support in such a way that, failure of the scaffold support does not cause failure of the life-line support, the life-line is free from danger of chafing on any sharp edge, and if the person should fall, he will be suspended at a distance of not more than five feet from the place where he was working.

- (10) Subsection 9 does not apply to a part of a suspended ^{Exception} scaffold which is designed, constructed and maintained in such a way that the failure of one support or one suspension will not cause the collapse of the part of the scaffold directly or by progressive collapse of the other supports or suspensions.

(11) An outrigger scaffold shall have,

Outrigger
scaffolds

- (a) the platform commencing within three inches of the wall; and
- (b) outrigger beams which are well secured against horizontal and vertical movement.

(12) A ladder jack scaffold shall,

Ladder jack
scaffolds

- (a) have ladder jacks that transmit their load directly to the ladder side rails;
- (b) not be used to provide a working platform more than ten feet above a floor, roof or any other surface supporting the ladders; and

- (c) not be used where the distance between the ladders exceeds ten feet.

Mobile
scaffolds

- (13) A mobile scaffold mounted on casters or wheels shall,
 - (a) where the height of the scaffold exceeds three times its least lateral dimension measured at the base, be equipped with outriggers, guy wires or other positive means to prevent over-turning;
 - (b) be equipped with a suitable braking device on each wheel;
 - (c) have the brakes applied when any person is on the scaffold or scaffold platform; and
 - (d) not be moved when a person is on the scaffold or scaffold platform except when every person on the scaffold is using a safety belt in a similar manner to that prescribed in subsection 9 for a person on a suspended scaffold.
- New.*

FORMWORK AND FALSEWORK

Concrete
forms, etc.,
when
adequate

- 588.—(1) Every structure and every part of a structure for the purpose of forming concrete shall be designed, constructed, supported and braced to safely withstand all loads likely to be applied to it before, during and after the placing of concrete.

Where
shores
used

- (2) Where shores are used,
 - (a) the bracing required by subsection 1 shall include sufficient bracing in the vertical and horizontal planes to prevent lateral movement of the formwork and buckling of the shores; and
 - (b) footings for shores shall be sound, rigid and capable of carrying the maximum load without excessive settlement or deformation.

Shoring
in tiers

- (3) Where shoring is more than one tier in height, the junction of each tier shall be braced to prevent any lateral movement.

- (4) Without limiting the generality of subsection 1,^{Idem} where falsework consists of shoring more than one tier in height or is a framed structure,
- (a) such falsework shall be designed by a professional engineer to safely withstand the loads mentioned in subsection 1;
 - (b) the drawings of such falsework shall be prepared and shall,
 - (i) show the size and specifications of the falsework, including the type and grade of all materials for its construction,
 - (ii) bear the seal or signature of the professional engineer, and
 - (iii) be kept at the project at all times while the falsework is being constructed or used; and
 - (c) such falsework shall be constructed in accordance with the drawings prescribed in clause *b* and any revisions shall be countersigned by the professional engineer mentioned in clause *a*.
- (5) Removal of falsework and formwork shall not be commenced until the concrete has attained sufficient strength to be,^{Removal of forms}
- (a) self-supporting, or
 - (b) capable of being adequately supported by reshoring. *New.*

DEMOLITION

- 589.—(1) No person shall commence or continue to demolish, dismantle or move a building or other structure until such times as,^{Precautions to be taken}
- (a) he has taken steps to prevent injury to any person in or near the project or the adjoining property; and

- (b) all existing gas, electrical and other services that are likely to endanger the safety of persons having access to the building or other structure have been properly shut off and disconnected.

Standing on
walls, etc.,
prohibited

- (2) No person shall stand on top of a wall, pier or chimney to remove material therefrom, unless safe flooring or adequate scaffolding or staging is provided on all sides not more than ten feet below his place of working.

Require-
ment as to
scaffolding

- (3) Scaffolding shall be made self-supporting to be independent of that portion of the project being demolished.

Application
of section

- (4) This section applies to demolition by,
 - (a) a heavy weight suspended by cable from a crane or other hoist machine;
 - (b) a power shovel, bulldozer or other vehicle;
 - (c) any other powered mechanical device;
 - (d) explosives; or
 - (e) any combination of the foregoing.

Duty of
person in
charge

- (5) The person in charge of demolition shall ensure that no person except his employees directly engaged on the demolition described in subsection 4, enters a demolition zone,
 - (a) having its centre at the point of demolition; and
 - (b) having a horizontal radius equal to one and a half times the height of the project, or portion of the project being demolished.

Controls of
mechanical
devices

- (6) The controls of a mechanical device for demolishing a project shall be operated from a safe location which shall be as remote as is practicable from the demolishing operation.

- (7) Where a swinging weight is used for demolishing, the supporting cable shall be of such length or so restrained that the weight will not swing against any structure other than the structure being demolished. ^{Swinging weights}

- (8) Before demolition commences, glass shall be removed from windows and other locations on the project or otherwise protected so that there is no possibility of breakage of the glass at any stage of the demolition. ^{Glass}

- (9) Demolition shall proceed systematically from the highest to the lowest point of the project. ^{Method of working}

- (10) In a skeleton structural frame building, the skeleton structural frame may be left in place during the demolition or dismantling of the masonry if the masonry and any loose material is removed from the skeleton structural frame in the order prescribed in subsection 9. ^{Idem}

- (11) The work above each tier or floor shall be completed before the safety of its supports is impaired by the demolition or dismantling operations. ^{Idem}

- (12) Where work on a building or structure being demolished or dismantled is suspended or discontinued prior to the completion of the demolition or dismantling, access to the part which has still to be demolished or dismantled shall be prevented by the installation of fencing or other equally effective barriers. ^{Where work suspended or discontinued}

- (13) A truss, girder or other structural member shall not be disconnected until it has been relieved of all loads except its own weight and has been temporarily supported. ^{Girders}

- (14) Masonry walls shall be removed in reasonably level courses. ^{Masonry walls}

- (15) Materials shall not be loosened or permitted to fall in such masses as to endanger the structural stability of a floor or other support of the project or of any scaffold. ^{Falling materials}

Basements
to be
backfilled

- (16) A basement, cellar or excavation on a project being demolished or dismantled shall be backfilled to grade upon completion of the demolition or dismantling unless the open edges of the basement, cellar or excavation are protected by adequate fencing.

Exception

- (17) Subsection 16 does not apply to a basement or cellar which has a roof, floor or other solid covering over it and all openings are boarded up to prevent access to the basement or cellar. *New.*

EXPLOSIVE ACTUATED FASTENING TOOLS

Fastening
tools

590.—(1) An explosive actuated fastening tool shall,

- (a) be operated only by an authorized person who has been duly instructed in the use of the equipment according to the manufacturer's specifications and recommendations;
- (b) be operated only in accordance with the manufacturer's approved recommendations;
- (c) be inspected by the operator before use to ensure that it is clean and in all ways suitable for use;
- (d) not be left unattended in a place where it might be available to an unauthorized person;
- (e) be stored in a locked container.

Explosive
loads

(2) Explosive loads shall,

- (a) be suitably identified;
- (b) be stored in separate compartments if of varied strength;
- (c) be stored in a locked container; and
- (d) not be left unattended in a place where they may be available to unauthorized persons.
New.

CONSTRUCTION HOISTS

591.—(1) In this section and in sections 592 to 596, Interpre-
tation

- (a) “attendant” means a person who is stationed on the conveyance or at its landing places and has control of any movement of the conveyance of the hoist as whole or part of his duties;
- (b) “chimney hoist” means a hoist used for hoisting or lowering persons or materials in or without a chimney;
- (c) “concrete bucket hoist” means a construction hoist used for hoisting or lowering concrete only;
- (d) “construction hoist” means a mechanism for use in connection with the construction, maintenance or demolition of a building, structure or other work on surface of a mining property,
 - (i) for hoisting or lowering materials or persons or both, and
 - (ii) equipped with a conveyance that moves in guides during its vertical movement, and includes its hoistway and hoistway enclosure;
- (e) “materials hoist” means a construction hoist used for hoisting or lowering materials only;
- (f) “operator” means a person who is stationed at the driving unit of a construction hoist and has direct control of any movement of the conveyance of the hoist as the whole or part of his duties;
- (g) “permit” means a permit granted under this section to operate a construction hoist under specific loadings;
- (h) “user” means the person in charge of a construction hoist as owner, lessee or otherwise, but does not include an operator or attendant as such;

- (i) "workmen's hoist" means a construction hoist used for hoisting or lowering persons or materials.

Specifica-
tions to be
approved

- (2) The specifications for a construction hoist and its equipment, and the general arrangement of the installation including location, tower and hoistway, shall be submitted to the chief engineer for approval and no installation shall be made until such approval has been received.

Specifica-
tions of
subsequent
installations

- (3) The second or any subsequent installation on the same property of a construction hoist and hoistway, originally approved by the chief engineer, may be made on the approval of the district electrical-mechanical engineer, without the submission of plans and specifications, after he has inspected the site.

Tests

- (4) Every construction hoist shall have tests conducted to prove the safe operation of all brakes, clutches, safety devices and controls, before being put into operation at a new location and thereafter, at such intervals as to ensure safe operation.

Idem

- (5) The results of such tests shall be recorded in the Machinery Record Book and made available to the district electrical-mechanical engineer.

Maximum
load
permits

- (6) No construction hoist shall be put into operation until a permit showing the maximum allowable loadings for persons or materials has been obtained from the district mining engineer, and such permit shall be displayed in a conspicuous place in the hoisting area.

Notice

- (7) Where the permit for a construction hoist does not designate the capacity in terms of persons, or persons and pounds, the user of the hoist shall furnish and display a notice, in the conveyance or other load carrying unit of the hoist, setting forth in letters not less than two inches high the words "No person shall ride in or on this conveyance".

Idem

- (8) The prohibition contained in the notice mentioned in subsection 7 applies to every person except a person engaged in the lubrication, repair, erection, dismantling or maintenance of a construction hoist.

- (9) Where a construction hoist has a driving unit that is not directly controlled by a device installed in the conveyance or at each landing of the hoistway, there shall be, ^{Where operator and attendant required}
- (a) an operator at all times; and
 - (b) an attendant in the conveyance or at each landing of the hoistway when persons are being conveyed.
- (10) Where an operator is required for the operation of a construction hoist, he shall, if required, possess a certificate of qualification. ^{Operators must be qualified}
- (11) Where an attendant is necessary for the operation of a construction hoist, the attendant shall have attained the age of eighteen years and shall have had adequate training and experience to perform his duties safely. ^{Attendants must be experienced}
- (12) Every construction hoist and all equipment used in connection therewith shall be so designed, installed and maintained that the safety of persons being carried or being near shall be ensured at all times. ^{Safety of persons}
- (13) The owner or user of a construction hoist shall provide a certificate from the manufacturer or an independent person approved by the chief engineer showing the maximum allowable weight that the hoist is capable of handling. ^{Load capacity certificate}
- (14) The operator of a construction hoist and the hoist shall be adequately protected against falling objects and other hazards consistent with the project. ^{Protection of hoist operators and hoists}
- (15) The installation shall be so arranged that the hoist operator will have the maximum practicable view of the tower. ^{Idem}
- (16) The building housing the hoist shall be adequately lighted. ^{Idem}
- (17) The machine area, tower landings and pit shall be kept free of building materials, debris, and equipment not required for the hoist. ^{Idem}
- (18) Flammable fuels, oil or other readily combustible materials shall be stored away from the hoist area. ^{Idem}

Main
overhead
beams of
hoist towers

(19) The main overhead beams at the top of the tower and the immediate members supporting the beams shall,

- (a) be of steel; and
- (b) safely support the loads likely to be imposed thereon, including,
 - (i) twice the maximum load on the ropes suspended from the overhead beams, and
 - (ii) the weight of the overhead beams and machinery thereon, and
 - (iii) be rigidly and safely supported at each end.

Hoist
towers

(20) A construction hoist tower shall,

- (a) be of steel;
- (b) safely support the loads likely to be imposed upon it, including,
 - (i) twice the maximum static load suspended from the overhead beams,
 - (ii) any loads due to a hoist boom or concrete bucket chute,
 - (iii) the weight of the tower, and
 - (iv) loads due to wind and ice;
- (c) be supported upon a safe, firm, level foundation such that the tower will remain in vertical alignment and the bearing capacity of the soil will not be exceeded by the maximum load from the tower, the hoist and its load;
- (d) extend above the top landing so that, when the conveyance is at the top landing, ten feet of overhead clearance will be provided from the topmost part of the conveyance to the lowest part of the tower or machinery over the hoistway;
- (e) not be located wholly or partially in front of an entrance to a building;

- (f) be plumb;
 - (g) be securely braced or guyed to the building or to other adequate anchorage at vertical spacings of not over forty feet; and
 - (h) have each guy wire of steel, a quarter of an inch or larger in diameter, securely attached at each end with rope clips, and with a turn-buckle to adjust its length.
- (21) Where part of a building or structure is used for a ^{Foundations} hoist foundation, it shall be constructed or reinforced to withstand any load that is likely to be placed upon it, and any space beneath a hoist foundation shall be enclosed to prevent any person from entering therein.
- (22) Safe means of access to the overhead sheaves shall ^{Access to sheaves} be provided by a ladder from the highest landing of the tower.
- (23) In the assembling of the segments of steel hoist ^{Assembling steel} towers, connections shall be made with bolts, pins or special devices to prevent the connections from accidentally disengaging.
- (24) Where the counterweight runway is located within ^{Counter-weight runways} 36 inches of the building floor or landing, the entire length of the runway adjacent to the building shall be screened with wire mesh (16 gauge) that will reject a ball one and one half inches in diameter.
- (25) Counterweight guards shall consist of a metal frame ^{Counter-weight guards} and No. 16 gauge sheet steel, or plywood three-quarters inch thick, properly reinforced and braced, and securely fastened in position.
- (26) Guards shall be installed on all counterweight run- ^{Idem} ways in the open side or sides at grade or working levels and extend to a height of at least eight feet above that level. *New.*
- 592.—(1) The hoistway of a construction hoist shall be ^{Hoistways} enclosed,
- (a) on sides not facing conveyance entrances at the lowest landing to a height of at least six feet; and
 - (b) on sides facing conveyance entrances, from the top of each landing opening to the under-

side of the next landing above or to the top of the hoistway, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter and the mesh shall be securely fastened to the tower.

Where
enclosure
not
required

- (2) The enclosure described in clause *b* of subsection 1 may be omitted where the conveyance is equipped on its entrance sides with a door of the vertically sliding or horizontal-swinging type,

(a) extending from within two inches of the conveyance floor to a height of not less than five feet;

(b) consisting of a metal frame and No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter; and

(c) equipped with a positive locking device.

Wire mesh

- (3) A hoistway within a building shall be fully enclosed, except at landing entrances, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter or with substantial building materials having equivalent strength and openings.

Pits

- (4) The hoistway pit shall be deep enough to allow the conveyance platform or bucket to descend to the proper level required for smooth loading and unloading at the lowest landing.

Require-
ments for
hoistway
gates

- (5) A substantial gate shall be provided at each entrance to the hoistway of a construction hoist and shall,

(a) extend from within two inches of floor level to a height of six feet;

(b) be of the vertically-lifting or horizontally-sliding type, or one-section horizontally-swinging type;

(c) not be of the vertically-collapsible type;

(d) reject a ball one and a half inches in diameter;

(e) be located between two and four inches of the landing platform; and

(f) provide minimum headroom clearance of six feet six inches when in the open position.

- (6) A counterweight for a gate shall be so enclosed that ^{Counterweights} it will be retained if its means of suspension fails.
- (7) Each gate shall be equipped with a mechanical latch ^{Latches} to keep the gate in the closed position.
- (8) Each landing gate shall be equipped with an electric ^{Contact light switches} contact switch that will turn on a light to indicate to the hoist operator when the gate is fully closed.
- (9) A substantial landing platform shall be provided at ^{Landing platforms} each entrance to the hoistway of a construction hoist and shall,
 - (a) be securely fastened and safely supported at each end; and
 - (b) be at least equal in width to the hoistway entrance and have, except at the lowest landing, for at least five feet to each side, a guard railing forty-two inches in height and a toe-board five inches in height, with the space between the railing and the toe-board filled in completely and securely with No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter or equal enclosure. *New.*

593.—(1) The conveyance of a construction hoist shall, ^{Conveyances}

- (a) be designed using a factor of safety of not less than five, based upon static loads and ultimate stresses of the materials;
- (b) adequately support fifty or more pounds per square foot of conveyance floor area;
- (c) operate in steel guides that will adequately withstand, without permanent deformation or damage, the application of the safety devices;
- (d) be equipped with approved guide shoes or rollers adjusted to provide only the necessary running clearance between the shoes and the guide rails;
- (e) be equipped with a safety device that will stop and sustain the conveyance when loaded to its maximum capacity should the means of suspension fail;

- (f) be located so that the clearance between the conveyance platform and the landing sill is not less than three-quarters of an inch and not more than two inches;
- (g) be enclosed on each non-entrance side with a toe-board five inches in height and with No. 16 gauge wire mesh extending at least six feet in height above the conveyance floor and rejecting a ball one and a half inches in diameter or shall be enclosed with solid material of adequate strength;
- (h) have an adequate hood, part of which may be hinged, composed of No. 10 gauge wire mesh rejecting a ball one and a half inches in diameter or composed of solid material of equivalent strength;
- (i) be equipped with a door or doors at least five feet in height above the conveyance floor, when used for the handling of persons, and so arranged that the doors can not open outward;
- (j) be equipped when conveying persons with safety devices activated by governors arranged to trip at 25 per cent above normal operating speed.

Cleats and
blocks

- (2) Where a wheelbarrow or other rolling equipment is to be transported, restraining cleats or blocks shall be provided on the conveyance platform.

Counter-
weights

- (3) All counterweights shall have their sections strongly bolted together, shall be so placed that they cannot fall on any part of the machinery and shall be suspended in guides in such a manner that they will run freely. *New.*

Hoist ropes

- 594.—(1) The hoisting rope or ropes of a construction hoist shall,

- (a) safely support the maximum static load to be imposed upon it without exceeding the ultimate breaking strength of the rope divided by the factor of safety for a construction hoist rope as set forth in the table in clause *k*;
- (b) be not less than one half inch in diameter and composed of not less than six strands each of nineteen steel wires;

- (c) where used on a drum hoist have at least three complete turns of rope on the drum when the conveyance is at its lowest point of travel;
- (d) be examined daily for kinks, broken wires or other physical defects;
- (e) be properly dressed and maintained in a safe working condition;
- (f) be protected from falling material and rope-ways shall be maintained free of all material;
- (g) not cross over or under ropes from other hoists;
- (h) not be spliced;
- (i) not encircle or be supported or guided by a sheave or drum whose diameter is less than twenty-four times the diameter of the rope in use;
- (j) be securely anchored at each end by approved means;
- (k) provide a factor of safety, when considering the static loadings involved, not less than required in the following table:

TABLE
Minimum Factors of Safety for Hoisting Ropes

Rope Speed (Feet per Minute)	Minimum Factor of Safety		Rope Speed (Feet per Minute)	Minimum Factor of Safety	
	Workmen's Hoist	Materials Hoist		Workmen's Hoist	Materials Hoist
50	7.60	6.65	300	9.20	8.20
75	7.75	6.85	350	9.50	8.45
100	7.95	7.00	400	9.75	8.70
125	8.10	7.15	450	10.00	8.90
150	8.25	7.30	500	10.25	9.15
175	8.40	7.45	550	10.45	9.30
200	8.60	7.65	600	10.70	9.50
225	8.75	7.75	650	10.85	9.65
250	8.90	7.90	700	11.00	9.80

- Travelways (2) Where practicable, travelways and walkways shall be routed clear of ropes and the hoistman's view of the hoistway, but in any event, a safe travelway shall be provided.
- Used ropes (3) No used rope shall be installed anew or used on a newly installed hoist until its condition has been proven satisfactory by examination, electro-magnetic test, laboratory test or combination of these tests as required by the district electrical-mechanical engineer.
- Broken wires in ropes (4) No rope shall be used where more than 5 per cent of the total number of wires in any one lay of the rope are broken, or where visual inspection shows evidence of severe wear, corrosion, kink, or other possible cause of rope failure. *New.*
- Signals 595.—(1) Electrical or mechanical means of signalling the operator of a construction hoist shall be provided at each landing,
- (a) where the travel of the conveyance is more than thirty-five feet; or
 - (b) where the hoist operator does not have a clear view of the landing.
- Code (2) The following code shall be used to give signals to a hoist operator:
- 1 signal—Stop immediately if in motion.
 - 1 signal—Hoist.
 - 2 signals—Lower.
 - *3 signals—Persons will be on conveyance, operate carefully.
 - *(This signal to be given before persons enter the conveyance).
- Voice communication (3) Where the operator does not have a clear view of all the hoistway landings, the operator shall have voice communication with each landing, but movement of the conveyance shall be made upon signal only.
- Electrical power (4) The electrical power in the signal system shall not exceed 30 volts. *New.*

SPECIFICATIONS

596.—(1) Every construction hoist shall be,

Specifica-
tions

- (a) equipped with a permanent tag or nameplate showing the horse power of the driving unit;
- (b) securely fastened to its foundation;
- (c) equipped with a brake or brakes that will stop and hold the conveyance when 150 per cent loaded, at every position in the hoistway;
- (d) if electrically driven, so arranged that the brake or brakes will be applied automatically in case of power failure;
- (e) if of a drum winder type, equipped with drum flanges of a height sufficient to provide a clearance of not less than twice the nominal diameter of the rope above the top layer of rope on the drum;
- (f) equipped with a device to indicate to the operator,
 - (i) position of conveyance in the hoistway,
 - (ii) limits of travel,
 - (iii) position at which underwind and overwind protective devices operate, and
 - (iv) position of all points at which landings may be made;
- (g) when the hoisting drum is of the free-running type, equipped with a pawl or other device that will hold the conveyance with its maximum load at any point in the hoistway;
- (h) provided with a disconnect switch at each location, wired in series, when the machine and the controller are in separate locations.
- (i) equipped with limit switches;
- (j) properly guarded to prevent injury to persons from gearing, shafting or other equipment;

- (k) capable of lifting the conveyance and its maximum allowable load, and it shall not be loaded beyond its rated capacity;
- (l) not operated until the hoistway is provided with adequate overwind and underwind clearance;
- (m) not used for the transportation of men at any time, unless equipped as a workmen's hoist.

Workmen's
hoists
additional
require-
ments

(2) Every workmen's hoist, in addition to the requirements of section 591, shall be,

- (a) equipped with two or more ropes;
- (b) equipped with overwind and underwind limit switches activated by the movement of the conveyance or counterweight, and in the latter case, the overwind protective device may be located at the lower end of travel;
- (c) equipped with a speed control device which shall automatically return to the "off" or "neutral" position when released;
- (d) equipped with a slack rope device, a reverse phase relay and a stop motion switch where the hoist is of the drum winding type;
- (e) so arranged that the brake or brakes shall be applied automatically in case of failure of electrical supply to the safety circuit, and one brake shall be mechanically applied and electrically released;
- (f) so arranged that the power unit shall drive the hoist drum when the conveyance is being raised or lowered and no mechanism for disconnecting the hoist drum from the power unit shall be available;
- (g) not used for the purpose of handling men and materials simultaneously with the exception of hand tools;
- (h) not operated until the hoistway is provided with,
 - (i) buffers in the pit,
 - (ii) a counterweight guard at the bottom of the hoistway, and

- (iii) an electro-mechanical interlock on each landing gate or a means to lock the gate mechanically so that it cannot be opened from the landing side unless the conveyance is at the landing, but at the lowest landing means of unlocking the gate from the landing side shall be provided;
- (i) inoperable unless the conveyance doors and hoistway gates at all landings are fully closed;
- (j) so arranged that control of the movement of the conveyance shall be by a conveyance-switch or push-button located in the conveyance with or without a push-button at each landing;
- (k) provided with a Machinery Record Book in which shall be recorded inspections, tests, and other data as required.
- (3) The requirements of this Part applicable to construction hoists apply also to concrete bucket hoists, except that a conveyance safety device shall not be required.
- (4) No person shall ride in or on a concrete bucket, except any person engaged in maintenance or repair work.
- (5) The plans and specifications for chimney hoists and the general arrangements of the installation shall be submitted to the chief engineer for approval before being put into use.
- (6) The bottom fastening of a boom to the tower shall be located at a level where guy ropes are fastened at horizontal girts, and the upper fastening for the boom shall be located at a distance not less than one-half the length of the boom above its bottom fastening and at a level where guy ropes are fastened at horizontal girts.
- (7) The boom and its associated equipment shall be of an approved design and construction and operated in a safe manner.
- (8) A qualified person shall be in charge of the operation of the boom. *New.*

GENERAL

Wilful
damage to
property

597.—(1) No person shall wilfully damage or, without proper authority, remove or render useless any fencing, casing, lining, guide, means of signalling, signal, cover, chain, flange, horn, brake, indicator, ladder, platform, steam gauge, water gauge, safety valve, electrical equipment, fire-fighting equipment, first-aid equipment or other appliance or thing provided at a mine or plant in compliance with this Act. 1961-62, c. 81, s. 595.

Persons
under the
influence of
or carrying
liquor

(2) No person under the influence of or carrying intoxicating liquor shall enter a mine or be in the proximity of a working place on the surface or near machinery in motion. 1961-62, c. 81, s. 596.

Abstracts
to be
posted

(3) Abstracts of the provisions of this Act, authorized by the chief engineer, shall be posted up in suitable places at the mine or works where they can be conveniently read, and the owner, agent or manager of the mine shall maintain such abstracts duly posted, and the removal or destruction of any of them is an offence against this Act. 1961-62, c. 81, s. 597.

Charges

(4) The Minister may prescribe the charge to be made for any record or log book required under this Part. 1961-62, c. 81, s. 598.

TESTING LABORATORIES

Testing
laboratories

598. The Minister may, out of the moneys that are appropriated for the purpose, establish, maintain and operate one or more laboratories for the purpose of testing or examining hoisting ropes or other appliances used in or about a mine and, by regulations made by the Lieutenant Governor in Council, may provide for,

- (a) the management and operation of such laboratory or laboratories;
- (b) the charges to be paid for services performed in such laboratory or laboratories;
- (c) such other purposes as the Lieutenant Governor in Council deems proper. 1961-62, c. 81, s. 599.

PARTY WALLS

599.—(1) Subject to section 195 and except by agreement ^{Boundary operations} under subsection 3, no mining operations shall be carried on within a distance from the property boundary of a mine or mining property of twice the width or thickness of the orebody at the boundary, measured parallel to the boundary from foot wall to hanging wall and normal to the dip, and in no event shall mining operations be carried on within a distance of twenty feet from the boundary measured from the perpendicular to the boundary,

(a) except that, for the purposes of preliminary investigation, development headings may be advanced to twenty feet from the boundary; and

(b) except that exploratory diamond drilling may be done.

(2) Subsection 1 does not apply to operations at sand, ^{Exception} gravel or clay pits or open-cast rock quarries. 1961-62, c. 81, s. 600 (1, 2).

(3) Adjoining owners or their agents may, by agreement ^{Agreement by adjoining owners or their agents} in writing signed by them, carry on mining operations within the distances from the property boundary mentioned in subsection 1.

(4) Two certified copies of every such agreement shall ^{Certified copies to chief engineer} be sent to the chief engineer. 1961-62, c. 81, s. 600 (3, 4), *amended*.

600.—(1) Where adjoining owners or their agents are ^{Disagreement on boundary operations} unable to agree to carry on mining operations within the distances from the property boundary mentioned in subsection 1 of section 599, application may be made to the Minister by either owner or his agent requesting the appointment of a committee to investigate in what manner and within what distances from the boundary mining operations may be carried on. 1961-62, c. 81, s. 601 (1), *amended*.

(2) Upon receipt of an application under subsection 1, ^{Appointment of committee} the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to investigate mining conditions at the boundary.

Duty of
committee

- (3) The committee so appointed shall hear representations from the adjoining owners and conduct such investigation of mining conditions on the adjoining mining properties as may be necessary at a time or times named by the Minister.

Report of
committee

- (4) Upon completion of their investigation, the committee shall forthwith submit a report in writing to the Minister with recommendations concerning terms and conditions of mining operations at the boundary.

Order of
Minister

- (5) Upon receipt of the report of the committee, the Minister may issue an order establishing the terms and conditions to be observed in mining operations at the boundary and shall fix the costs of the committee to the adjoining owners. 1961-62, c. 81, s. 601 (2-5).

Suspected
breach or
trespass of
party wall

- 601.—(1) Where the owner or his agent of a mine or mining property has reason to believe that a breach has been made in or a trespass has been committed with respect to the party wall between his mine or mining property and an adjoining mine or mining property, application may be made to the Minister by the owner for the appointment of a committee to examine the party wall and enter the adjoining mines or mining properties with an assistant or assistants and use where necessary the workings and appliances thereof. 1961-62, c. 81, s. 602 (1), *amended*.

Appoint-
ment of
committee

- (2) Upon receipt of an application under subsection 1, the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to conduct such examination of the party wall as may be necessary.

Duty of
committee

- (3) The committee so appointed shall conduct such examination of the party wall as may be necessary at a time or times named by the Minister.

Report of
committee

- (4) Upon completion of the examination the committee shall forthwith submit a report of its findings in writing to the Minister.

Costs

- (5) Upon receipt of the report of the committee, the Minister shall fix the costs of the committee to one or both owners.

Breach of
party wall

- (6) Where a breach has been made in a party wall of a mine by the owner of an adjoining mine, or by his

employees or agents, without the permission in writing of the owner of the first-mentioned mine or without authority under this Act, the Minister may make an order directing the offending owner to close the breach permanently or to carry out such measures as the Minister deems necessary to prevent water from flowing into the mine of the owner complaining of the breach.

- (7) Where work has been discontinued in the mine of the offending owner or where expedient for any other reason, the Minister may authorize the owner complaining of the breach, his employees or agents, to enter the mine and works of the offending owner to erect bulkheads and carry out such measures as the Minister deems necessary to protect from damage the mine of the owner complaining of the breach and his employees and agents from danger from accumulations of water in the mine of the offending owner. 1961-62, c. 81, s. 602 (2-7). ^{Minister may authorize entry}

602. For good cause shown and upon such terms as seem just, the Minister may vary or rescind an order made under section 600 or 601. 1961-62, c. 81, s. 603. ^{Minister may vary or rescind order}

BRINE WELLS

- 603.—(1) In this section, ^{Interpretation}

(a) “brine well” means a hole or opening in the ground for use in brining;

(b) “brining” means the extraction of salt in solution by any method. 1961-62, c. 81, s. 604 (1).

- (2) No person shall drill or bore a brine well except under the authority of a permit in writing issued by the chief engineer upon application therefor in the prescribed form. 1961-62, c. 81, s. 604 (2), *amended*. ^{Permit to bore or drill a brine well}

- (3) A permit shall not be issued, ^{Permits not issued}

(a) to authorize a person to drill or bore a brine well on property in which he does not own, hold or lease, or is not otherwise entitled to, the mining rights; or

(b) where the proposed brine well is nearer the boundary of such property than 500 feet.

- | | |
|--|---|
| Location of
brine well | (4) The chief engineer may reduce or extend the distance referred to in clause <i>b</i> of subsection 3 where in his opinion it is advisable to do so and shall notify the applicant of any such reduction or extension within thirty days from the date upon which the application for the permit is filed. |
| Condition
of permit | (5) A permit is subject to the condition that the brine well in respect of which it is issued is bored or drilled in the location described in the permit. 1961-62, c. 81, s. 604 (3-5). |
| Time for
issuance of
permit | (6) A permit shall be issued or refused within thirty days from the date on which the application therefor is filed, except that, where notice has been given by the chief engineer under subsection 4, the permit shall be issued upon the receipt by the chief engineer of the applicant's consent thereto. 1961-62, c. 81, s. 604 (6), <i>amended</i> . |
| Log of
drilling
operations | (7) Where a person drills or bores a brine well, he shall forward a log of the drilling or boring in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the drilling or boring operations, and, upon his request in writing, the log shall be confidential for a period of six months. |
| Protection
of water
horizons | (8) A person boring or drilling a brine well shall take such reasonable measures as are necessary to control the infiltration of water from one horizon to any other horizon that may be penetrated during the drilling or boring operations. |
| Protection
of deposits | (9) All brine wells shall be cased and equipped so as to reasonably ensure against the uncontrolled flow of oil, natural gas, brine or water. |
| Standard of
casing and
equipment | (10) Casing and equipment shall be in good condition and of a thickness and strength adequate to withstand any fluid pressure to which they might normally be subjected. |
| Plugging of
abandoned
wells | (11) Where practicable, all brine wells shall be plugged by the person operating them, before being abandoned, in a manner that will, <ul style="list-style-type: none"> (a) reasonably ensure that salt horizons and potential oil or natural gas producing horizons are protected; and (b) retain water and brine in their original formations. |

- (12) Before commencing to plug a brine well, the person proposing to carry out the plugging operations shall report the particulars thereof to the chief engineer in the prescribed form. ^{Report of proposed plugging}
- (13) Where a person plugs a brine well, he shall forward a record of the plugging in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the plugging operations. 1961-62, c. 81, s. 604 (7-13). ^{Record of plugging operations}

FATAL ACCIDENTS

- 604.—(1) The manager or other person in charge of a mine or plant wherein or in connection wherewith a fatal accident occurs shall forthwith notify a coroner having jurisdiction in the place where the accident occurred. ^{Notice}
- (2) Where a fatal accident occurs in or in connection with a mine or plant, an inquest shall be held. ^{Inquest}
- (3) The engineer and any person authorized to act on his behalf are entitled to be present and to examine or cross-examine any witness at an inquest held concerning a death caused by an accident at a mine or plant, and, if the engineer or someone on his behalf is not present, the coroner shall, before proceeding with the evidence, adjourn the inquest and give the Deputy Minister not less than four days notice of the time and place at which the evidence is to be taken. ^{Right of engineer re inquest}
- (4) Where, in or about a mine, plant, quarry, or sand, clay or gravel pit, an accident occurs that causes loss of life to a person employed thereat, the owner, agent, manager or superintendent thereof shall immediately notify the engineer resident in that part of Ontario in which the accident occurred and the chief engineer by telephone or telegraph. ^{Notice of fatal accidents}
- (5) Subject to subsection 6, no person shall, except for the purpose of saving life or relieving human suffering, interfere with, destroy, carry away or alter the position of any wreckage, article or thing at the scene of or connected with the accident until the engineer has completed an investigation of the circumstances surrounding the accident. ^{Scene to be undisturbed}

Permission
to alter
scene

- (6) Where it is impossible for the engineer to make an immediate investigation of an accident, the chief engineer or engineer may permit the wreckage, article and things at the scene of or connected with the accident to be moved to such extent as is necessary to permit the work of the mine, plant, quarry, or sand, clay or gravel pit, to be proceeded with, if photographs or drawings showing details of the scene of the accident have been made prior to the moving. 1961-62, c. 81, s. 169, *amended*.

NON-FATAL ACCIDENTS

Notice

605. Where, in or about a mine, plant, quarry, or a sand, clay or gravel pit, an accident occurs that causes fracture or dislocation of any bones of the body, or any other injury that in the opinion of the attending physician may result in the injured person being incapacitated for work for at least one day, to a person employed therein, the owner, agent or manager shall within three days of the accident send notice in writing to the engineer resident in that part of Ontario in which the mine, plant, quarry or pit is situate on the form prescribed for such purpose. 1961-62, c. 81, s. 605, *amended*.

SPECIAL OCCURRENCES

Notice

- 606.—(1) Where, in or about a mine or plant,
- (a) an accident involving the hoist, sheaves, hoisting rope, shaft or winze conveyance, or shaft or winze timbering;
 - (b) an explosion or fire involving an air compressor, air receiver or compressed air line;
 - (c) an inrush of water from old workings or otherwise;
 - (d) a failure of an underground dam or bulkhead, as defined by subsection 1 of section 278;
 - (e) an outbreak of fire below ground or an outbreak of fire above ground if it endangers any structure of the mine plant;
 - (f) a premature or unexpected explosion or ignition of explosives or blasting agents;

- (g) an asphyxiation effecting a partial or total loss of physical control;
- (h) a flammable gas in the mine workings;
- (i) an unexpected and non-controlled extensive subsidence or caving of mine workings; or
- (j) an electrical equipment failure or incident which causes, or threatens to cause, injury to personnel or damage to major equipment or property,

occurs, whether or not loss of life or personal injury is caused thereby, the owner, agent or manager of the mine shall, within the twenty-four hours next after the occurrence, send notice in writing in duplicate to the engineer resident in that part of Ontario in which the mine or plant is situate and shall furnish, upon request, such particulars in respect thereof as the engineer requires.

- (2) Where, in or about a mine, an outbreak of fire occurs that endangers the health or safety of one or more persons and the services of the mine rescue stations are required, the manager shall immediately notify the mine rescue training officer and the district mining engineer resident in that part of Ontario in which the mine is situate. Notice of fire and need of rescue equipment
- (3) Where a rockburst occurs, whether or not loss of life or personal injury is caused thereby, and its location is determined as being within the workings of a mine, the manager of the mine shall, within the twenty-four hours next after the location of the burst has been determined, send notice in writing to the district mining engineer resident in that part of Ontario in which the mine is situate and shall furnish, upon request, such particulars with respect thereto as the engineer requires. Rockburst
- (4) A record of the occurrence of all rockbursts at a mine shall be kept, showing, as far as possible, the time, location, extent of the burst, any injury to persons and any other information pertaining to the burst, and such record shall be available to the district mining engineer at all times. 1961-62, c. 81, s. 606, *amended*. Record of rockbursts

OTHER NOTICES AND INFORMATION

Written
notice by
owner or
agent

607.—(1) The owner or agent of a mine or plant shall give or cause the manager to give to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine or plant is situate, written notice of,

- (a) (i) the intended installation of, including the specifications and layout of,
 - 1. any mine hoisting facilities,
 - 2. any power supply facilities, and
 - 3. any ore treatment facilities,
- (ii) the lot, concession and township on which the operations are to commence,
- (iii) the name and address of the person in charge;
- (b) the connection or reconnection of any mining electrical equipment with a source of electrical energy controlled by any other person, at least fourteen days prior to the connection or reconnection;
- (c) the commencement, or resumption after an interruption of one month or more, of mining operations, within fourteen days after the commencement or resumption; and
- (d) the closing down of the mine and that,
 - (i) the requirements of subsection 1 of section 168 as to the fencing of the top of the shaft, entrances from the surface, pits and openings,
 - (ii) the requirements of section 289 as to the disposal of explosives and blasting agents,
 - (iii) the requirements of section 351 as to the abandonment of a shaft compartment for hoisting purposes and as to the removal and disposition of hoisting ropes,

- (iv) the requirements of section 425 as to the disconnection of the supply station from the power source and notification of same to the chief engineer, and
- (v) the requirements of subsections 7 and 8 of section 609 as to the filing of plans and sections,

have been complied with within fourteen days of the closing down.

- (2) The owner, agent or manager of a mine or plant shall furnish to the engineer resident in that part of Ontario in which the mine or plant is situate all information that the engineer requires for the purposes of his returns. 1961-62, c. 81, s. 607, *amended*.

STATISTICAL RETURNS

- 608.—(1) For the purpose of their tabulation, under the instruction of the Minister, the owner, agent or manager of every mine, plant, pit, quarry or other works to which this Act applies shall, on or before the 31st day of March in every year, send to the Department on the forms supplied a correct return for the year that ended on the 31st day of December next preceding, showing the number of persons ordinarily employed below and above ground respectively, the total amount of wages paid during the year, the quantity in standard weight of the minerals dressed and of the undressed mineral that has been sold, treated or used during such year, and the value or estimated value thereof, and such other particulars as the Minister by regulation prescribes.
- (2) The owner, agent or manager of every metalliferous mine shall, if required, make a similar return for the month or quarter at the end of each month or quarter of the calendar year.
 - (3) Every owner, agent or manager of a mine, plant, pit, quarry or other works who fails to comply with this section, or makes a return that is to his knowledge false in any particular, is guilty of an offence against this Act. 1961-62, c. 81, s. 608, *amended*.

MINE OR PLANT PLANS

- 609.—(1) At every mine, the owner, agent or manager shall cause the following plans on a scale acceptable to the

chief engineer to be kept up to a date not more than six months last past:

1. A surface plan showing the boundaries of the property, the co-ordinates of the section of property under which mining has been done, all lakes, streams, roads, railways, electric power transmission lines, main pipe lines, buildings, adits, open surface workings, diamond-drill holes, outcroppings of rock, dumps, tailings-disposal sites and shafts, the latter having been geographically located by connection with a survey on record with the Department.
2. The method of capping any opening shall be described on the plans referred to in item 1.
3. Underground plans of each level and section showing all underground workings, including shafts and tunnels, diamond-drill holes, dams and bulkheads, and each level plan shall be shown on a separate drawing.
4. Vertical mine sections at suitable intervals and at suitable azimuths, showing all shafts, tunnels, drifts, stopes and other mine workings in relation to the surface, including the location of the top of the bedrock, surface of the overburden and the bottom and surface of any known watercourse or body of water, and each section shall be shown on a separate drawing.
5. Adequate ventilation plans, showing the direction and volume of the main air currents, the location of permanent fans, ventilation doors and stoppings, and connections with adjacent mines.

Idem

- (2) The owner, agent or manager of every mine in which electricity is used underground shall keep or cause to be kept up to a date not more than six months last past an adequate plan or diagram showing on a suitable scale the following information:
 1. The position of all fixed electrical apparatus in the mine.
 2. The routes of all fixed power feeders and fixed branch feeders properly noted and referenced.

3. The rating of all electrical feeder control apparatus and equipment.

- (3) Such plans or diagrams shall be available to the district electrical-mechanical engineer at all times and copies of the plans or diagrams shall be furnished him upon request. ^{Idem}
- (4) On any examination or inspection of a mine or plant, the owner, agent or manager shall, if required, produce to the engineer or other person authorized by the Minister or the Deputy Minister all plans and sections of the workings referred to in subsections 1, 2 and 3. ^{Plans to be available to engineer}
- (5) The owner, agent or manager shall, if required by the engineer or other person authorized by the Minister or Deputy Minister, cause to be marked on such plans and sections the progress of the mine up to the time of the examination or inspection, and shall furnish him with a copy or tracing thereof. ^{Marking subsequent progress on plan}
- (6) A certified copy of the plans required by paragraph 3 of subsection 1 and mine sections showing all shafts as required by paragraph 4 of subsection 1 shall be made and forwarded to the chief engineer on or before the 31st day of March in each year, showing the workings of the mine up to and including the 31st day of December next preceding. ^{Plans of working mines to be filed}
- (7) Before a mine or part of a mine is abandoned, closed down or otherwise rendered inaccessible, all underground plans and sections referred to in paragraphs 3 and 4 of subsection 1 shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer. ^{Plans to be filed before abandonment}
- (8) Before work at a mine ceases, the surface plan referred to in paragraph 1 of subsection 1 showing all openings to underground workings shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer. ^{Idem}
- (9) The owner, agent or manager of every mine, plant, pit, quarry or other works to which this section applies is responsible for compliance with the provisions thereof and every owner, agent or manager or other person who fails to comply with any of the ^{Responsibility of owner}

provisions of this section, or who produces to an engineer or other authorized person, or files or causes to be produced or filed, a plan that to his knowledge is false in any particular is guilty of an offence against this Act.

Plans to be
treated as
confidential

- (10) Every such plan shall be treated as confidential information for the use of the officers of the Department and shall not be exhibited, nor shall any information contained therein be imparted to any person except with the written permission of the owner or agent of the mine or plant. 1961-62, c. 81, s. 609, *amended*.

POWERS AND DUTIES OF ENGINEERS

Powers of
engineer

610.—(1) It is the duty of the engineer and he has power,

- (a) to make such examination and inquiry as he deems necessary to ascertain whether this Act is complied with, and to give notice to the owner, agent or manager in writing of any particulars in which he considers the mine or plant or any part thereof, or any matter, thing or practice, to be dangerous or defective or contrary to this Act, and to require the same to be remedied within the time named in the notice;
- (b) to enter, inspect and examine any mine or plant or any part thereof at any reasonable time by day or night, but so as not to unnecessarily impede or obstruct the working of the mine or plant;
- (c) to order the immediate cessation of work in and the departure of all persons from any mine or plant or part thereof that he considers unsafe, or to allow persons to continue to work therein on such precautions being taken as he deems necessary; and
- (d) to exercise such other powers as he deems necessary for ensuring the health and safety of miners and all other persons employed in or about mines, plants, pits, quarries or other works.

Reports of
engineer

- (2) It is the duty of the engineer to make a report of every examination and inquiry made in the course of his duties during the year to the Minister, the Deputy Minister or the chief engineer, as required by

the circumstances, immediately upon the completion of the examination or inquiry. 1961-62, c. 81, s. 610, *amended*.

- 611.—(1) The Minister may direct an engineer to make a ^{Special report} special report with respect to any accident in or about a mine or plant that has caused the loss of life or injury to any person, or with respect to any condition in or about a mine or plant. 1961-62, c. 81, s. 611 (1), *amended*.
- (2) In conducting the inquiry, the engineer has power ^{Engineer may take evidence} to compel the attendance of witnesses and the production of books, documents and things, and to take evidence upon oath. 1961-62, c. 81, s. 611 (2).
- 612.—(1) Non-compliance with a written order of the ^{Offence} engineer issued in accordance with section 610 shall be deemed an offence against this Part.
- (2) Failure to give written notice of the completion of ^{Idem} any work in accordance with a written order of the engineer issued under section 610 shall be deemed an offence against this Part. 1961-62, c. 81, s. 612.

3. Part XI of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

R.S.O. 1960,
c. 241,
Pt. XI
(1961-62,
c. 81, s. 1),
re-enacted

PART XI

OFFENCES, PENALTIES AND PROSECUTIONS

- 620.—(1) Every person who, ^{Offences}
- (a) prospects, occupies or works any Crown lands or mining rights for minerals otherwise than in accordance with this Act;
 - (b) performs or causes to be performed on any Crown lands, or on any lands where the mining rights are in the Crown, any boring by diamond or other core drill for the purpose of locating valuable mineral in place, except where such Crown lands or mining rights have been staked out and recorded as a mining claim in accordance with this Act;
 - (c) wilfully defaces, alters, removes or disturbs any post, stake, picket, boundary line, figure,

writing or other mark lawfully placed, standing or made under this Act;

- (d) wilfully pulls down, injures or defaces any rules or notices posted up by the owner, agent or manager of a mine or plant;
- (e) wilfully obstructs the Commissioner or any officer appointed under this Act in the execution of his duty;
- (f) being the owner or agent of a mine, refuses or neglects to furnish to the Commissioner or to any person appointed by him or to any officer appointed under this Act the means necessary for making an entry, inspection, examination or inquiry in relation to a mine under this Act, other than Part IX;
- (g) unlawfully marks or stakes out in whole or in part a mining claim, a placer mining claim, or an area for a boring permit;
- (h) wilfully acts in contravention of this Act, other than Part IX or Part X, in any particular not hereinbefore set forth;
- (i) wilfully contravenes any provision of this Act or any regulation for the contravention of which no other penalty is provided;
- (j) wilfully makes any material change in the wording or numbering of a miner's licence after its issue; or
- (k) attempts to do any of the acts mentioned in the foregoing clauses,

is guilty of an offence against this Act and is liable to a fine of not more than \$20 for every day upon which the offence occurs or continues. 1961-62, c. 81, s. 620 (1), *amended*.

False
statements

- (2) Every person who knowingly makes a false statement in an application, certificate, report, statement or other document filed or made as required by or under this Act or the regulations is guilty of an offence and is liable to a fine of \$500 or to imprisonment for a term of not more than six months, or to both. 1961-62, c. 81, s. 620 (2).

621.—(1) No person shall construct or cause to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals that may result in the escape or release into the open air of sulphur, arsenic or other fumes in quantities that may injure trees or other vegetation unless and until the site of the plant has been approved by the Lieutenant Governor in Council. Smelters

(2) Every person who constructs or causes to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals, without the approval of the Lieutenant Governor in Council, and sulphur, arsenic or other fumes escape or are released therefrom into the open air and injure trees or other vegetation is guilty of an offence and is liable to a fine of not more than \$1,000 for every day upon which such fumes escape or are released therefrom into the open air. 1961-62, c. 81, s. 621. Offence

622. Every person who wilfully neglects or refuses to obey any order or award of the Commissioner, except for the payment of money, is, in addition to any other liability, liable to a fine of not more than \$250 and, upon conviction thereof, is liable to imprisonment for a term of not more than six months unless the fine and costs are sooner paid. 1961-62, c. 81, s. 622. Disobeying
order or
award of
Commis-
sioner

623.—(1) No person who, Use of word
"Bureau"
prohibited

- (a) carries on the business of mining or dealing in mines, mining claims, mining lands, or mining rights, or the shares, stocks, or bonds of a mining company; or
- (b) acts as broker or agent in or for the disposal of mines, mining claims, mining lands, or mining rights, or of any such shares, stocks or bonds; or
- (c) offers or undertakes to examine or report on a mine, mining claim, mining land or mining rights,

shall use the word "Bureau" as the name or title or part of the name or title under which he acts or carries on business.

(2) Every person who contravenes any of the provisions of this section is guilty of an offence and is liable to a fine of not more than \$20 for every day upon which Offence

the offence occurs or continues. 1961-62, c. 81, s. 623.

Interpre-
tation

624.—(1) In this section, the noun “mine” includes “plant” as defined in Part IX. *New.*

Penalty for
offence
against
Part IX

(2) An owner, agent or other person who contravenes any provision of Part IX is guilty of an offence and is liable to a fine of not more than \$1,000.

Additional
penalty for
continuing
offence

(3) Where the Deputy Minister or an engineer has given written notice to an owner or agent or a person engaged or employed in or about a mine that an offence has been committed against Part IX, such owner or agent or other person is liable to a further fine of not more than \$100 for every day upon which the offence continues after such notice.

Imprison-
ment

(4) An owner, agent or other person is, upon conviction, liable to imprisonment for a term of not more than three months unless the fine and costs are sooner paid.

Imprison-
ment of
offender
against
Part IX
in certain
cases

(5) Where the offence is one that might have endangered the safety of those employed in or about the mine or caused serious personal injury or a dangerous accident, and was committed wilfully by the personal act, default or negligence of the accused, every person who is guilty of an offence against Part IX is, in addition to or in substitution for any fine that may be imposed, liable to imprisonment with or without hard labour for a term of not more than three months. 1961-62, c. 81, s. 624.

Instituting
prosecutions
for offences

625.—(1) No prosecution shall be instituted for an offence against Part IX or Part X or any regulation made in pursuance thereof except,

(a) by an engineer;

(b) by direction of the county or district Crown attorney; or

(c) by the leave in writing of the Minister of Justice and Attorney General,

or for an offence against any other provision of this Act or of any regulation made in pursuance thereof except,

(d) by or by leave of the Commissioner or a recorder;

(e) by direction of the county or district Crown attorney; or

(f) by leave of the Minister of Justice and Attorney General.

(2) No person not being the actual offender is liable in respect of such offence if he proves that he did not participate in the contravention of the provision for a breach of which he is charged and that he was not to blame for the breach and that according to his position and authority he took all reasonable means in his power to prevent the breach and to secure compliance with the provisions of Part IX or Part X. When person not actual offender not liable

(3) The burden of proving that the provisions of sections 172 to 596 have been suspended is upon the person charged with a contravention thereof and any such suspension may be proved by the evidence or certificate of an engineer. 1961-62, c. 81, s. 625. Onus of proof

626. Except as to offences against section 14, every prosecution for an offence against or for the recovery of a penalty imposed by or under the authority of this Act shall take place before a provincial judge or before the Commissioner, and, save as herein otherwise provided, *The Summary Convictions Act* applies to every such prosecution. 1961-62, c. 81, s. 626, *amended*. Procedure on prosecutions R.S.O. 1960, c. 387

4. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation. Commencement

5. This Act may be cited as *The Mining Amendment Act*, 1970. Short title

An Act to amend The Mining Act

1st Reading

February 27, 1969

2nd Reading

3rd Reading

MR. LAWRENCE (St. George)

CA20N

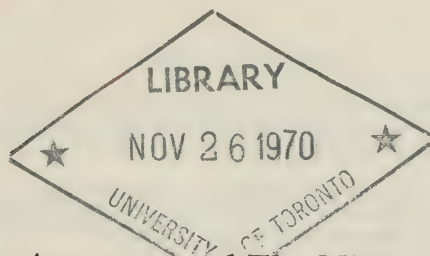
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Government
Publication

BILL 2

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Mining Act

Mr. LAWRENCE (St. George)

(Reprinted as amended by the Natural Resources and Tourism Committee)

TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

EXPLANATORY NOTES

This Bill contains a complete revision of Part IX of the Act which deals with the operation of mines and Part XI of the Act which deals with offences, penalties and prosecutions.

The chief purpose of this revision is the adaptation to the mining industry of *The Construction Safety Act, 1961-62*, *The Construction Hoists Act, 1960-61*, *The Industrial Safety Act, 1964*, *The Trench Excavators' Protection Act*, and *The Elevators and Lifts Act*.

Other changes contained in this revision up-date the legislation to keep pace with advances in the mechanization of the mining industry including:

1. The electro-magnetic testing of all hoisting ropes throughout the total length. This testing equipment has been developed by the Ontario Mining Association and the Department of Mines in a joint venture over the past ten years.
2. Direct-fired heating of underground workings.
3. Non-destructive testing to be done on shafting, brakes, etc., on hoisting equipment and cranes, by such means as ultra-sonic examination, etc.
4. Requirements in regard to guide and rubbing ropes as used in shafts. This is a new development in Ontario.
5. Notification to be given on major electrical installations.
6. Protection to be taken when operating cranes and power shovels near overhead power lines.

Other notable changes include:

1. Advance mine rescue fresh air bases in deep mines.
2. Concreting shaft and raise openings which are to be abandoned.
3. Personal protective equipment such as footwear, hearing protection, etc.
4. Safety precautions to be taken when dump trucks are being repaired or adjusted.

BILL 2

1970

An Act to amend The Mining Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Paragraph 1 of section 1 of *The Mining Act* is ^{R.S.O. 1960,} amended by inserting after “mine” in the third line “or ^{c. 241, s. 1,} plant”, so that the paragraph shall read as follows: ^{par. 1, amended}

1. “agent”, where it occurs in Parts IX and XI, means a person having, on behalf of the owner, the care or direction of a mine or plant or a part thereof.

(2) Paragraph 10 of the said section 1 is amended by in- ^{R.S.O. 1960,}serting after “boilers” in the second line “compressors” and ^{c. 241, s. 1,}by adding at the end thereof “or plant”, so that the para- ^{par. 10, amended}graph shall read as follows:

10. “machinery” includes steam and other engines, boilers, compressors, furnaces, milling and crushing apparatus, hoisting and pumping equipment, chains, trucks, tramways, tackle, blocks, ropes and tools, and all appliances used in or about or in connection with a mine or plant.

(3) Paragraphs 12 and 13 of the said section 1 are repealed ^{R.S.O. 1960,}and the following substituted therefor: ^{c. 241, s. 1,} ^{pars. 12, 13, re-enacted}

12. the noun “mine”, except as defined in Part IX, includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral or mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on, and all ways, works, machinery, plant, buildings and premises below or above ground belonging to or used in connection with the mine, and also any quarry, excavation or opening of the ground made for the purpose of searching for or

removal of mineral, rock, stratum, earth, clay, sand or gravel and any roasting or smelting furnace, concentrator, mill, work or place used for or in connection with washing, crushing, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any of such substances.

13. the verb "mine" and the word "mining", except as defined in Part IX, include any mode or method of working whereby the earth or any rock, stratum, stone or mineral-bearing substance may be disturbed, removed, washed, sifted, leached, roasted, smelted, refined, crushed or dealt with for the purpose of obtaining any mineral therefrom, whether it has been previously disturbed or not.

R.S.O. 1960,
c. 241, s. 1,
par. 18,
amended

(4) Paragraph 18 of the said section 1 is amended by inserting after "mine" in the fourth line "or plant" and by inserting after "mine" in the seventh line and in the ninth line "plant", so that the paragraph shall read as follows:

18. "owner", when used in Parts IX and XI, includes every person, mining partnership and company being the immediate proprietor or lessee or occupier of a mine or plant or a part thereof, or of any land located, patented or leased as mining land, but does not include a person or a mining partnership or company receiving merely a royalty, rent or fine from a mine, plant or mining lands, or being merely the proprietor of a mine, plant or mining lands subject to a lease, grant or other authority for the working thereof, or the owner of the surface rights and not of the ore or minerals.

R.S.O. 1960,
c. 241,
Pt. IX
(1961-62,
c. 81, s. 1),
re-enacted

2. Part IX of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

PART IX

OPERATION OF MINES

Interpre-
tation

161.—(1) In this Part,

- (a) "authorized" means properly authorized to perform any specified duty or to do any specified act;

- (b) "engineer" means a member of the Association of Professional Engineers of the Province of Ontario who is designated by the Department as "chief engineer" or as "district mining engineer", or as "district electrical-mechanical engineer";
- (c) "manager" means the owner of a mine or plant or a part thereof or his agent, or a person designated by the owner or his agent as responsible for the control, management and direction of a mine, plant or a part thereof;
- (d) the noun "mine" includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on and also any quarry, excavation or opening in the ground made for the purpose of searching for or removal of mineral, rock, stratum, earth, clay, sand or gravel, and any premises below or above ground belonging to or used in connection with the mine not included in the definition of the noun "plant";
- (e) the verb "mine" and the word "mining" mean the performance of any work in or about a mine;
- (f) "mine rescue training officer" means a person in charge of a mine rescue station and responsible for mine rescue training;
- (g) the noun "plant" includes any roasting or smelting furnace, concentrator, mill or place and work used for or in connection with washing, crushing, grinding, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any substance included under the noun "mine" and all ways, works, machinery, buildings and premises above ground used in connection therewith;
- (h) "professional engineer" means a person who is a member of or is licensed by the Association of Professional Engineers of Ontario;

- (i) "qualified" means properly qualified to perform any specified duty or to do any specified act;
- (j) "safety" means freedom from injury to the body or freedom from damage to the health of a person.

Where Part
does not
apply

- (2) The provisions of this Part do not apply to cook-houses, bunkhouses, recreational centres, dwellings, and the grounds used in connection therewith. 1961-62, c. 81, s. 1, par. 12, *part, amended*.

EMPLOYMENT IN AND ABOUT MINES

Employ-
ment, of
children,

- 162.—(1) No person under the age of sixteen years shall be employed in or about a mine or plant, and no person under the age of eighteen years shall be employed underground in a mine or at the working face of an open-cut workings, pit or quarry.

of females

- (2) No female person shall be employed on underground work in any mine or at the working face of an open-cut workings, pit or quarry, except,
 - (a) those who have to enter the underground parts of a mine for the purpose of a non-manual occupation; or
 - (b) those employed in health and welfare services; or
 - (c) those who, in the course of their studies spend a period of training in the underground parts of a mine. 1961-62, c. 81, s. 162, *amended*.

MINE RESCUE STATIONS

Establish-
ment

- 163.—(1) Mine rescue stations shall be established, equipped, operated and maintained at such places and in such manner as the Minister directs. 1961-62, c. 81, s. 163 (1).

Mine rescue
training
officers

- (2) The Lieutenant Governor in Council may appoint such mine rescue training officers as he deems advisable.

Duty of
mine rescue
training
officers

- (3) The equipment and operation of mine rescue stations shall be in the charge of mine rescue training officers, and it is the duty of such officers to teach and train mine rescue crews and supervisors in the use and maintenance of the apparatus in such manner

as the chief engineer directs, to maintain the apparatus in efficient and workable condition so as to be available for immediate use, and to perform such other duties as the chief engineer deems necessary.

- (4) The owner, agent or manager of a mine shall cause such workmen and supervisors to be trained in the use and maintenance of mine rescue equipment as the district mining engineer deems necessary. 1961-62, c. 81, s. 162 (2-4), *amended*. Training of
rescue crews
- (5) The mine manager is responsible for the supervision and direction of mine rescue crews in all mine rescue and recovery operations conducted at the mine. Responsi-
bility in
mine rescue
operations
- (6) The cost of establishing, maintaining and operating mine rescue stations shall be paid out of the Consolidated Revenue Fund. Cost
- (7) The Workmen's Compensation Board shall at the end of each quarter year reimburse the Consolidated Revenue Fund from moneys assessed and levied by the Board against employers in the mining industry for the total amount certified by the Deputy Minister to have been paid out under subsection 6. Idem
- (8) All moneys received from the sale or disposal of any equipment, buildings or machinery forming part of or appertaining to mine rescue stations shall be paid to the Workmen's Compensation Board and shall be placed to the credit of the class funds of the employers in the mining industry. 1961-62, c. 81, s. 162 (5-8). Disposal of
equipment,
etc.
- (9) Fresh air bases shall be strategically located in deep mines and their design, locations, equipment and use are to be approved by the chief engineer. *New*. Fresh
air bases

HOURS OF LABOUR UNDERGROUND

164.—(1) In this section,

Inter-
pretation

- (a) "shift" means a body of workmen whose hours for beginning and terminating work in the mine are the same or approximately the same;
- (b) "workman" means a person employed underground in a mine who is not the owner or agent or an official of the mine,

and, where any question or dispute arises as to the meaning or application of clause *b* of subsection 2 or as to the meaning of "shift", "workman", or "underground", the certificate of the engineer is conclusive.

Hours of
labour
under-
ground

- (2) No workman shall remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours, which eight hours shall be reckoned from the time he arrives at his place of work in the mine until the time he leaves such place, except that,

(a) a shift or any part of a shift may remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours on one day of a week for the purpose of avoiding work on Sunday or on a holiday or changing shift;

(b) such limit does not apply to a foreman, pumpman, cagetender, or any person engaged solely in surveying or measuring, nor does it apply in cases of emergency where life or property is in imminent danger, nor does it apply to repair work which is necessary for normal production.

Hours of
operator
of hoist

- (3) No person shall operate or be permitted to operate, either on the surface or underground, a hoist, by means of which persons or material are hoisted, lowered or handled in a shaft or winze, for more than eight hours in any consecutive twenty-four hours, except,

(a) that, in the event of one of the regular hoistmen being absent from duty through sickness or otherwise and where no competent substitute is available, the remaining hoistman or hoistmen may work extra time not exceeding four hours each in any consecutive twenty-four hours for a period not exceeding fourteen days;

(b) that, in the case where the work at a mine or in a shaft or winze at a mine is not carried out continuously on three shifts per day, the hoistman may work such extra time as is necessary for lowering or hoisting the workmen employed on the shift at the beginning and end of each shift;

(c) in the cases provided for in clauses *a* and *b* of subsection 2. 1961-62, c. 81, s. 164 (1-3).

QUALIFICATIONS OF HOISTMEN

- 165.—(1) No person under the age of twenty-one years ^{Age limit of hoistmen} and no person who has not had adequate experience on a reversing hoist shall be authorized to operate a hoist by which persons are handled in a shaft or winze at a mine.
- (2) No person under the age of eighteen years shall be ^{Idem} authorized to operate a hoist at a mine.
- (3) No person shall operate or be permitted to operate a hoist at a shaft or winze in which persons are handled at a mine, or for any other purpose designated by an engineer, unless he has been examined by a legally qualified medical practitioner acceptable to the employer and the medical practitioner has issued to him on the form prescribed a hoistman's medical certificate to the effect that to the best of the practitioner's knowledge the person is not subject to any infirmity, mental or physical (particularly with regard to sight, hearing and heart), to such a degree as to interfere with the efficient discharge of his duties. 1961-62, c. 81, s. 165 (1-3), *amended*.
- (4) Every hoistman's medical certificate lapses and shall ^{Expiry of certificate} be deemed to have expired at the end of one year from its date.
- (5) Every hoistman's medical certificate shall be kept ^{Filing of certificate} on file by the employer and made available to an engineer at his request.
- (6) A record of all hoistmen's medical certificates pertaining to hoistmen operating in any one hoistroom shall be kept posted therein, showing the names of the hoistmen and the date of the last certificate issued to each. ^{Posting record of certificates}
- (7) This section does not apply to the operation of a ^{Automatic hoist} hoist when on automatic or semi-automatic control. ^{exempted} 1961-62, c. 81, s. 165 (4-7).
166. Where a contravention of section 162, 164 or 165 ^{Proceedings where persons employed contrary to Act} takes place, the owner, agent or manager of the mine, or any of them, may be proceeded against, jointly or separately, and may be convicted of such offence, but neither the owner nor the agent nor the manager shall be so convicted if he proves that the offence was committed without his knowledge or consent, and that he had caused notices of the said sections to be posted up, and to be kept posted up, at some conspicuous place at or near the entrance to the mining work. 1961-62, c. 81, s. 166, *amended*.

MEDICAL EXAMINATIONS

Interpre-
tation

167.—(1) In this section,

- (a) "applicant" means a person who is not the holder of a certificate in good standing who is seeking employment in a dust exposure occupation;
- (b) "certificate" means an initial certificate, an extended certificate, an endorsed certificate, a miner's certificate or a renewed certificate;
- (c) "dust exposure occupation" means,
 - (i) employment underground in a mine,
 - (ii) employment at the surface of a mine, other than at a pit or quarry, in ore or rock crushing operations where the ore or rock is not crushed in water or a chemical solution,
 - (iii) employment at other locations, as designated by the chief engineer, at the surface of a mine or in a pit or quarry;
- (d) "endorsed certificate" means an initial certificate or extended certificate that has been endorsed under clause *b* of subsection 7;
- (e) "extended certificate" means an initial certificate that has been extended under clause *a* of subsection 7;
- (f) "initial certificate" means a certificate issued to an applicant under subsection 6;
- (g) "medical officer" means a medical officer appointed under *The Workmen's Compensation Act* to carry out the provisions of this Act with regard to the examination of employees or applicants for employment;
- (h) "miner's certificate" means a certificate issued under subsection 8;
- (i) "renewed certificate" means a miner's certificate that has been renewed under subsection 9.

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c. 437

- (2) No person shall be employed in a dust exposure occupation unless he is the holder of a certificate in good standing. Employment in dust exposure occupation
- (3) Subject to subsection 4, every certificate remains in force for not more than twelve months, except that a medical officer may at any time recall the holder of a certificate for examination within the scope of the existing certificate and may extend, endorse, renew or cancel the certificate in accordance with his finding upon the examination. Term of certificate
- (4) In those parts of Ontario where the examinations under subsections 6 to 9 are conducted by a travelling medical officer, no certificate shall be deemed to have expired because of the failure of the medical officer to conduct an examination prior to the date of expiration of a certificate, and the holder of a certificate that would otherwise have expired shall present himself before a medical officer for re-examination at the first opportunity available after the date upon which his certificate would have so expired. Examination by travelling medical officer
- (5) Where a certificate of a person employed in the mining industry has expired because of the failure of its holder to present himself to a medical officer for examination, a medical officer may extend, endorse or renew the certificate or issue a miner's certificate, as the circumstances of the case require, if he is satisfied that the failure was caused by the inability of the holder to so present himself because of illness or other circumstances beyond his control. Expiration of certificate
- (6) Every applicant shall be examined by a medical officer before commencing employment, and, if the medical officer finds upon examination that the applicant is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall issue to the applicant an initial certificate. Examination before employment
- (7) The holder of an initial certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall, Initial certificate holder, re-examination
- (a) in the case of a holder who since the issuance of his initial certificate has completed less than eleven months employment in a dust

exposure occupation, extend the certificate for such period as he deems necessary to permit the holder to complete twelve months employment in a dust exposure occupation, and he may from time to time extend the certificate for the same purpose; and

- (b) in the case of a holder of an initial certificate who since the issuance of his initial certificate has completed eleven months or more employment in a dust exposure occupation, endorse the certificate.

Issue of
miner's
certificate

- (8) The holder of an endorsed certificate who since the endorsation of his initial certificate has completed eleven months or more employment in a dust exposure occupation shall, prior to its expiration, present himself to a medical officer for examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall issue him a miner's certificate.

Miner's
certificate
holder, re-
examination

- (9) The holder of a miner's certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall renew the certificate, which may be further renewed from year to year upon the passing of a similar examination.

Unemployed
holder of
certificate

- (10) The holder of a certificate who for any reason is out of employment in a dust exposure occupation may apply to a medical officer for the extension, endorsement or renewal of his certificate or for the issuance of a miner's certificate, as the case may be, and, upon presentation of the holder's certificate, the medical officer shall conduct the required examination and effect such extension, endorsement, renewal or issuance as is warranted by his findings upon the examination.

Holder of
initial or
extended
certificate

- (11) Where the holder of an initial or extended certificate has been out of employment in the mining industry for a period exceeding one year and during such period has failed, through neglect on his part, to have his certificate extended or endorsed, such certificate is void and its holder is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only.

- (12) Where the holder of an endorsed certificate or miner's certificate has been out of employment in the mining industry for a period exceeding two years and during such period has failed, through neglect on his part, to obtain a miner's certificate or to have a miner's certificate renewed, his certificate is void and the holder thereof is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only. Holder of endorsed or miner's certificate
- (13) Where the holder of a certificate has been out of employment in the mining industry for a period exceeding three years, he is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only. Where un-employment exceeds three years
- (14) The manager or superintendent of the mine at which the holder of a certificate is employed may require the certificate to be delivered to and left in the custody of the manager or superintendent during the period of the holder's employment at the mine, but the certificate shall be returned to the holder upon the termination of his employment at the mine. Custody of certificate
- (15) The chief engineer may exempt from subsections 2 to 14 any mine or any person employed thereat where, in his opinion, the mine does not contain silica in quantity likely to produce silicosis or where for any other reason he is of the opinion that such subsections should not apply. Exemption
- (16) Subsections 2 to 14 do not apply to a person usually employed in a dust exposure occupation for less than fifty hours in each calendar month. Idem
- (17) The Lieutenant Governor in Council may make Regulations regulations,
- (a) prescribing the nature of the examination to be made by a medical officer under subsections 6 to 11;
 - (b) prescribing the forms of certificates and extensions, endorsements and renewals thereof;
 - (c) generally for the better carrying out of this section. 1961-62, c. 81, s. 167.

REHABILITATION OF TAILINGS DISPOSAL AND PLANT AREAS




168.—(1) (a) The mine manager shall plant and maintain vegetation, or otherwise stabilize the tailings areas which will not be required for future impoundment of tailings to the satisfaction of the district engineer of mines.

(b) At least one year prior to cessation of operation, the mine manager shall submit to the district engineer of mines, two copies of a plan showing,

(i) the extent of the tailings area on which planting of vegetation or stabilization must still be completed,

(ii) the rehabilitation that is to be done in the mine or plant area, together with descriptive information.

(c) The rehabilitation work mentioned in clause *b* shall be completed to the satisfaction of the chief engineer of mines.

(d) A bond or security deposit in an amount deemed necessary by the chief engineer of mines to complete the rehabilitation mentioned in clause *b* shall be deposited with the Department of Mines. 

Protection
of unused
workings

(2) (a) Where a mine has been abandoned or where the work in it has been discontinued, the owner or lessee or any other person interested in the mineral of the mine shall cause the top of any shaft or raise opening to the surface to be solidly bulkheaded with reinforced concrete at bedrock or on top of the concrete collar of such opening, except that where in the opinion of the district mining engineer this is impracticable, the requirements of clause *b* apply.

All other
openings
and pits

(b) All other openings and pits, dangerous by reason of their depth or other conditions, shall be and shall be kept securely fenced or otherwise protected against inadvertent access to the satisfaction of the district mining engineer, but where in his opinion the mine or workings present no greater hazard than the

natural topographic features of the area, this provision need not be complied with. 1961-62, c. 81, s. 168 (1), *amended*.

- (c) Every such person who, after notice in writing from the district mining engineer, fails to comply with his directions as to such fencing or protection within the time specified in the notice is guilty of an offence against this Act. Failure to erect fence after notice
- (d) Where the district mining engineer finds that any such fencing or protection is required in order to avoid danger to health or property, he may cause the work to be done and may pay the costs incurred out of any moneys provided for the purposes of this Act, and the amount of such costs with interest thereon is a lien upon the mine or mining work of which notice in such form as the Minister prescribes may be registered in the proper registry or land titles office, and no further transfer or other dealings with the mine or mining work shall take place until such amount is paid. When engineer may erect fence
- (e) The amount of such costs with interest thereon is due from the owner or lessee to the Crown and is recoverable at the suit of the district mining engineer in any court of competent jurisdiction. Recovery of costs of work
- (f) Notwithstanding clauses d and e, the Minister, either without payment or on such terms and conditions as he deems proper, may cause a cessation of charge to be registered in the proper registry or land titles office, and thereupon the lien registered under clause d is void and of no effect. 1961-62, c. 81, s. 168 (2-5), *amended*. Discharge of fencing liens

RESPONSIBILITY AS TO PROVISIONS

- 169.—(1) The owner or agent of an operating mine or plant shall appoint a manager who is responsible for the control, management and direction of the mine or plant. 1961-62, c. 81, s. 170 (5), *amended*. Responsibility as to carrying out requirements
- (2) The owner or agent shall provide the manager of a mine or plant with the necessary means and shall afford him every facility for complying with this Part. 1961-62, c. 81, s. 170 (8), *amended*. Owner to give facilities to manager to comply
- (3) Subject to the requirements of this Act and except as otherwise provided in this Act, responsibility for Responsibility as to qualifications

the authorization and decisions as to the qualifications of employees rests with the employer or his agent. 1961-62, c. 81, s. 161.

Manager's
absence

- (4) The manager of an operating mine or plant shall appoint one or more suitable persons who are responsible, during the manager's absence, for taking all necessary and reasonable measures to enforce the requirements of subsection 7. 1961-62, c. 81, s. 170 (6, 7), *amended*.

Duty as to
knowledge
of
requirements

- (5) It is the duty of every manager, supervisor or other person in charge of workmen and every hoistman, deckman, conveyance attendant or person who handles explosives or blasting agents or who operates, installs or maintains any equipment, machinery or electrical apparatus in or about a mine or plant, to know the requirements of this Part that apply to the work under his charge and direction or in which he is engaged. 1961-62, c. 81, s. 173 *amended*.

Manager,
etc., to
enforce
requirements

- (6) Except as to any provisions that the chief engineer has directed are not applicable thereto,

the manager of the mine or plant shall take all necessary and reasonable measures to enforce the provisions of this Part and to ensure that they are observed by every employee of the mine or plant, and every supervisor shall take all necessary and reasonable measures to enforce the requirements of all such provisions as are applicable to the work over which he has supervision and to ensure that they are observed by the persons under his charge and direction. 1961-62, c. 81, s. 170 (6).

Manager
may make
rules

- (7) The manager of a mine or plant may make rules not inconsistent with any provision of this Part or any special direction made by an engineer as herein provided for the maintenance of order and discipline and the prevention of accidents in or about the mine or plant, and may submit any rule so made to the chief engineer who shall lay the rules before the Minister for his approval, and, upon such approval being given, the rules take effect after they have been posted up in a conspicuous place at the mine for at least fourteen days; but the Minister may disallow any of such rules or direct such changes to be

made in them as he deems proper. 1961-62, c. 81, s. 170 (3), *amended*.

- (8) Every such rule, after approval and when and so long ^{Offence} as it is posted up and is legible, has the same force and effect as the provisions of this Act, and any person who contravenes any such rule is liable to the penalty provided for a breach of the provisions of this Act. 1961-62, c. 81, s. 170 (4).
- (9)—(a) Where the owner, agent or manager of a mine ^{Suspension of provision} or plant, by an application in writing stating the reasons therefor, requests the engineer to suspend any of the requirements of sections 173 to 596 as to such mine or plant, the chief engineer may in writing direct that the requirements of any such provision do not apply to such mine or plant, or may in writing direct that any such provision does not apply so long as such limitations and conditions as he sees fit to impose are observed or complied with. 1961-62, c. 81, s. 170 (1), *amended*.
- (b) The owner, agent, or manager shall forthwith ^{Idem} post in a prominent place a copy of the chief engineer's suspension and the terms and requirements thereof, so that any such suspension may be drawn to the attention of the employees affected. *New*.
- (10) The chief engineer may at any time cancel any order ^{Cancellation of suspension} made under clause *a* of subsection 9 or make such alterations therein as he deems proper in view of any change in the conditions under which the order was made or upon it appearing to him that such change is advisable for any other reason. 1961-62, c. 81, s. 170 (2).
- (11) Every person who is engaged exclusively in super- ^{Knowledge of English language} vising the work of other persons at a mine or plant shall be able to give and to receive and understand orders in the English language.
- (12) Every person in charge as a deckman, conveyance ^{Idem} attendant or hoistman at a mine or plant shall have a knowledge of the English language adequate for enabling him to carry out his duties in a thoroughly safe manner. 1961-62, c. 81, s. 173, *amended*.

Lifting
safely

- (13) No owner, agent or manager shall require a person to lift, carry or move anything so heavy or in such manner as to be likely to endanger his safety or the safety of any other person in a mine or plant. *New.*

Adequate
training
for
employee

- (14) Every manager shall ensure that no person works without supervision at any machine unless the person,
- (a) has received adequate training and instruction in the operation of the machine and any dangers connected therewith;
 - (b) has received adequate supervision by a person having thorough knowledge and experience with the machine; and
 - (c) is capable of safely operating the machine without supervision.

Operation of
machines
and devices

- (15) No manager, supervisor or his agent who has reasonable cause to believe that any machine or device in or about a mine or plant is unsafe or in contravention of this Act shall cause or permit it to be used or operated.

Idem

- (16) No person who has reasonable cause to believe that any machine or device, which has been assigned to him for use in or about a mine or plant, is unsafe or in contravention of this Act shall use the machine or device until he has,
- (a) reported the defect to his supervisor; and
 - (b) obtained specific instructions in writing from his supervisor to use or operate the machine or device.

Idem

- (17) No person shall use or operate any machine or device in or about a mine or plant in an unsafe manner or in a manner that does not comply with this Act.

Boisterous
conduct

- (18) No person in a mine or plant shall engage in any contest, feat of strength, unnecessary running or rough or boisterous conduct that is likely to endanger the safety of any person. *New.*

Responsi-
bility of
contractors,
etc.

- (19) Where work in or about a mine or plant is let by the owner, agent or manager to a contractor,

- (a) the owner, agent or manager shall, except for work involving surface prospecting, give written notice to the chief engineer and to the district mining engineer, resident in that part of Ontario in which the mine or plant is situated that a contract has been made;
 - (b) the contractor shall give written notice to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine is situated of any sub-contract that has been made;
 - (c) the contractor or a subcontractor, as the case may be, shall appoint a person to be in charge and responsible for the work being done by the contractor or the subcontractor;
 - (d) the person so appointed by the contractor or the subcontractor shall comply and enforce compliance with all the provisions of this Part pertaining to the work over which he has control and is, in any case of non-compliance therewith, guilty of an offence and punishable in like manner as if he were the owner, agent or manager. 1961-62, c. 81, s. 170 (9), *amended*.
 - (e) where the prime contractor has two or more subcontractors working on a project on surface, the prime contractor shall,
 1. Appoint a person to have authority to enforce compliance with all the provisions of this Part on all the work of the project.
 2. Provide and maintain first-aid requirements in accordance with regulations under *The Workmen's Compensation Act*. *New*. R.S.O. 1960,
c. 437
- 170.—(1) Every person employed at a mine or plant shall take all necessary and reasonable measures to carry out his duties in accordance with such provisions as are applicable to the work in which he is engaged. Measures to
be taken
- (2) Every person through whose neglect or wrongful act a contravention occurs at a mine or plant shall be deemed to have incurred the penalties provided for a breach of the provisions of this Part. *New*. Incurring
penalties

REQUIREMENTS

Require-
ments

171. Subject to sections 169 and 170, sections 173 to 596 shall be observed and carried out at every mine and plant. 1961-62, c. 81, s. 171, *amended*.

Interpre-
tation

172. In sections 173 to 596,

- (a) "blasting agent" means a type of explosive of low sensitivity that cannot, as mixed and packaged for use, be detonated by a single No. 8 detonator, and, unless specified, the requirements for explosives do not apply to a blasting agent;
- (b) "boatswain's chair" means a suspended scaffold in the form of a seat used by one person in a sitting position and supported by slings attached to a suspended rope, and includes the wearing of a safety belt by the person;
- (c) "charge" means,
 - (i) explosives and a detonator,
 - (ii) a blasting agent and a detonator, or
 - (iii) a blasting agent and a detonator and primer that is exploded as a single unit;
- (d) "drum hoist" means the type of hoist that spools the rope on the hoist drum;
- (e) "explosives" includes detonators and those powders that are cap sensitive with a single detonator as packaged for use, and includes black blasting powder;
- (f) "fire-resistive" when applied to buildings, structures or parts thereof, means constructed in an approved manner of steel, masonry, reinforced concrete, or other equivalent materials, or any combination of such materials;
- (g) "friction hoist" means the type of hoist where the rope is driven by the friction between it

and the drum tread and where the rope is not spooled on the hoist drum but passes over or around it;

- (h) "safety belt" means a belt worn round the waist of a person and includes the rope and necessary fittings attached to the belt, which shall be suitable for their purpose, and the safety belt shall be of sufficient strength to absorb twice the load of energy which, under the circumstances of its use, could be transmitted to it;
- (i) "safety harness" means a combination of a belt worn round the waist of a person and straps attached to the belt and passing over the person's shoulders, with the necessary rope fittings and assembly that meets the strength requirements of a safety belt and is suitable for raising the person by the rope without permitting the body of the person to bend at the waist;
- (j) "shot" means the sound of a charge or charges being exploded;
- (k) "therm-hour" means 100,000 British thermal units per hour or 39.3082 brake horse-power;
- (l) "utility hoist", including "tugger hoist" other than a hoist designated as a "construction hoist", means a powered hoist used for handling materials only in or about a mine or plant, and the safety requirements may be designated by the district electrical-mechanical engineer according to the conditions of use,

and the decision of an engineer as to whether or not a situation complies with a requirement therein in which "suitable", "adequate", "approved", or any expression of like import, is used and as to the meaning and application of any such expression is final and conclusive, and a certificate of any such decision signed by the engineer may be used as evidence in any court. 1961-62, c. 81, s. 172, *amended*.

PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

Safety
hats and
footwear

173.—(1) An approved safety hat and approved safety footwear shall be worn by every person employed,

(a) underground in a mine;

(b) in a location in a pit or quarry designated by the district mining engineer.

Designated
areas for
protective
equipment

(2) The manager shall designate such other areas or occupations and circumstances where any or all of the following items shall be worn by every person employed therein:

1. Approved safety hat.

2. Approved safety footwear.

3. Approved eye protective equipment.

4. Approved hearing protective equipment.

5. Approved breathing apparatus.

6. Any other approved personal protective equipment which the job in question may require.

Hearing
protection

(3) The manager shall ensure that all steps practicable are taken to prevent injury to the hearing of a person from excessive noise.

Masks,
respirators,
etc.

(4) Where applicable, masks or respirators of an approved type and design for the hazard involved shall be worn by persons who are exposed to dust, gases, or irritating and dangerous fumes.

Idem

(5) Every person shall properly maintain his mask or respirator.

Idem

(6) Emergency breathing apparatus, where required, shall be maintained in condition for immediate use, and,

(a) the manager shall designate a responsible person to regularly inspect, sterilize and perform any necessary maintenance on such apparatus; and



(b) such apparatus, when not in use, shall be stored in a dust-tight container.

- (7) There shall be provided and maintained in safe ^{Safety belts, etc.} condition safety belts or safety harnesses for the use of persons where necessary.
- (8) Every person shall properly maintain his safety belt ^{Idem} or safety harness.
- (9) Every person employed at a mine or plant shall, ^{Duty to wear safety equipment}
- (a) use or wear the personal protective clothing and equipment required by this Part; and
 - (b) properly maintain his personal protective clothing and equipment. *New.*

FIRE PROTECTION — MINES

174. Sections 175 to 195 and sections 559 to 563 apply at ^{Application of ss. 175-195 and ss. 559-563} mine operations underground and in the vicinity of shaft collars. *New.*
- 175.—(1) General procedure to be followed both on sur- ^{Procedure} face and underground in case of fire underground or in a mine plant building that may endanger the mine entrance shall be drawn up, and all persons concerned shall be informed and kept informed of their duties.
- (2) Copies of the procedure or suitable excerpts shall be ^{Posting} kept posted in the shafthouse and other prominent places. 1961-62, c. 81, s. 174 (1, 2).
- (3) A test of the effectiveness of such procedure shall be ^{Tests} made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 174 (4), *amended.*
- 176.—(1) Every mine worked from shafts or adits pro- ^{Stench warning} ducing over 100 tons of ore per day and such other mines as are designated by the district mining engineer shall be equipped with an approved apparatus for the introduction into the mine workings of ethyl mercaptan or other warning gas or material approved by the chief engineer, and such apparatus shall be available at all times in a suitable location and kept ready for instant use for the purpose of warning persons underground of any emergency necessitating a speedy evacuation of the workings.

- Idem (2) A test of the effectiveness of the warning and procedure described in subsection 1 shall be made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 175 (1, 2), *amended*.
- Idem (3) Every person employed underground shall have the meaning of the warning explained to him, and he shall be acquainted with the smell of the warning gas. *New*.
- Flammable refuse 177.—(1) No flammable refuse shall be allowed to accumulate underground but shall be removed from the workings at least once a week and brought to the surface and there disposed of in a suitable manner. 1961-62, c. 81, s. 176 (1).
- Idem (2) No flammable refuse shall be allowed to accumulate in or about a headframe, shafthouse or any plant building in which a fire may endanger the mine entrance.
- Idem (3) Suitable fire-resistive containers for the temporary disposal of flammable refuse such as scrap paper, oily waste, rags and other similar materials shall be provided at all shaft stations, underground shops, lunch rooms and enclosures necessary for the housing of machinery or equipment or stores and buildings mentioned in subsection 2, and such containers shall be regularly emptied. 1961-62, c. 81, s. 176 (2, 3), *amended*.
- Unused timber (4) All timber not in use in a mine shall, as soon as is practicable, be taken from the mine and shall not be piled up and permitted to decay therein.
- Certificate as to flammable refuse (5) Every shift boss or mine captain shall certify in writing to the mine manager at least once a week that there is no accumulation of flammable refuse underground in the area under his supervision except as reported by him.
- Storage of oil and grease (6) Oil, grease or other flammable material shall not be stored in a shafthouse or portalhouse, but it is permissible, if adequate precautions are taken, to have in the shafthouse or portalhouse, for distribution only, an amount not exceeding the requirements for one day's operation.

- (7) Volatile, flammable liquids shall not be stored in a shafthouse or portalhouse and such material shall be transported underground only in approved types of containers. ^{Volatile, flammable liquids}
- (8) Oil, grease or volatile flammable liquid while underground shall be contained in suitable metal receptacles, and the amount of oil or grease so kept underground shall not exceed the requirements for seven days and the amount of volatile flammable liquid kept underground shall not exceed the requirements for the current day's work. 1961-62, c. 81, s. 176 (4-8). ^{Oil and grease underground}
- (9) The transfer of liquid fuels from one container to another by the direct application of air under pressure shall not be permitted, except where properly designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 194 (3). ^{Idem}
178. No person shall build, set or maintain a fire underground for any purpose unless he has proper authority and suitable instructions for so doing, and only after the necessary fire-fighting equipment has been provided. 1961-62, c. 81, s. 177. ^{Building fires prohibited}
179. Where open-flame lights are used at a mine not equipped with a headframe and shafthouse or portalhouse constructed of fire-resistive materials, the interior of the shafthouse or portalhouse shall be tightly sheeted with metal or a suitable fire-resistive material to a height of eight feet. 1961-62, c. 81, s. 178. ^{Open-flame lights, precautions}
-  180. All underground shops, lunch rooms and buildings or enclosures necessary for the housing of machinery, equipment and stores shall be constructed of fire-resistive material and so located and maintained as to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 179. ^{Underground structures} 
- 181.—(1) If the engineer is of the opinion that a fire hazard may be created at a mine by smoking, or by the use of open-flame lamps, matches, or other means of producing heat or fire, he may designate the mine or part or parts of the mine as a fire hazard area. ^{Fire hazard areas}
- (2) No person shall smoke or be allowed to smoke, use open-flame lamps, matches or other means of producing heat or fire in such areas except with the permission in writing of the engineer and under such conditions as he deems proper. ^{Idem}

- Idem (3) Such fire hazard areas shall be properly identified by suitable warning signs. 1961-62, c. 81, s. 180 (1-3).
- Idem (4) The manager shall cause such signs to be installed and maintained as long as the area is so designated. 1961-62, c. 81, s. 180 (4), *amended*.
- When flammable gas encountered in mine 182. When a flammable gas in dangerous concentrations has been found to exist in a mine working, such working or the parts of such working concerned shall immediately be considered a fire hazard area, and every precaution shall be taken while clearing the area or doing any work therein to prevent ignition of the gas and these precautions shall be continued as long as the hazard exists. 1961-62, c. 81, s. 181.
- Fire-fighting equipment 183.—(1) Suitable fire-fighting equipment shall be provided and maintained in or about every headframe, shafthouse, portalhouse and every plant building in which a fire may endanger the mine entrance and at every shaft or winze station underground. 1961-62, c. 81, s. 182 (1), *amended*.
- Idem (2) Suitable fire-fighting equipment shall be provided and maintained at all underground crushers, pump stations, tipples and underground electrical installations except where, in the opinion of the engineer, no fire hazard exists. 1961-62, c. 81, s. 182 (2).
- Idem (3) A properly authorized person or persons shall make a monthly inspection of all fire-fighting equipment referred to in subsections 1 and 2, and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3), *amended*.
- Storage of carbide 184.—(1) Calcium carbide shall be stored on the surface only, in a suitable, dry place, other than the shaft-house or portalhouse or changehouse, and in its original unopened container.
- Distribution of carbide (2) For the purpose of distributing calcium carbide, adequate provisions for the handling of quantities not in excess of one day's supply or 100 pounds, whichever is the greater, shall be made at every mine.
- Idem (3) Such distribution shall not take place in a shaft-house, portalhouse or changehouse unless such structure is fire-resistive but shall be provided for by the

installation of a suitable distribution centre not closer than fifty feet to the nearest point of any part of the headframe, shafthouse or portalhouse.

- (4) Adequate precautions shall always be taken to ensure that calcium carbide is handled in a safe manner and no calcium carbide shall be taken underground except in suitable containers. 1961-62, c. 81, s. 183. Handling of carbide
185. Where operations involving the use of acetylene, kerosene, gasoline or other torches are conducted in a headframe, shafthouse, portalhouse or other building in which a fire may endanger the mine entrance or the underground workings of a mine, suitable measures for protection against fire shall be adopted and rigidly adhered to. 1961-62, c. 81, s. 184. Fire protection where torches used
- 186.—(1) Where cylinders of compressed gas, such as acetylene and oxygen, are transported underground for any cutting or welding operation, all fittings, such as regulators and manifolds, shall be disconnected from the cylinders and the valves shall be protected in a suitable manner. 1961-62, c. 81, s. 185. Underground transportation of compressed gases
- (2) Any such removable protective device shall be replaced at any time a cylinder is left unattended or before a cylinder is moved to a new location. 1961-62, c. 81, s. 185 (1, 2). Idem
- (3) In all cases where cylinders of compressed gas are operated from within any cage, skip or other shaft conveyance, or where the cylinders are set up in a location not readily accessible to the person operating the nozzle equipment, a second competent person shall be employed at all times to attend to the operation of the cylinder-control devices. 1961-62, c. 81, s. 185 (3), *amended*. Operation of welding and cutting torches
- (4) In all cases where cylinders of compressed gas are used underground for the purpose of supplying cutting or welding equipment, special precautions shall be observed to avert the possibility of damage to or failure of the regulators, manifolds and hoses used in conjunction with the equipment. 1961-62, c. 81, s. 185 (4). Compressed gas
187. No device for the generation of gas, such as acetylene for supplying cutting or welding equipment, shall be used in the underground workings of a mine. 1961-62, c. 81, s. 186. Generation of gas underground forbidden

Escape-
ment exit

188.—(1) In every mine where a vertical or inclined shaft has been sunk or an adit driven and stoping has commenced, there shall be provided and maintained, in addition to the hoisting shaft or the opening through which persons are let into or out of the mine and the ore extracted, a separate escapement exit. 1961-62, c. 81, s. 187.

Location
and cover
of exit

(2) Such exit shall be outside any structure covering the main entrance to the mine and shall be isolated by a distance of not less than one hundred feet from the main entrance.

Idem

(3) Any structure covering such exit shall be of fire-resistive material and so constructed to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 187 (1, 2), *amended*.

When
necessary

(4) If such an escapement exit is not in existence at the time that stoping is commenced, work upon it shall be begun as soon as stoping is commenced and shall be diligently prosecuted until it is completed, and means of escapement, other than the main outlet of the mine, shall be provided to and connected with the lowest level on which stoping operations are being carried on.

Size of
exit

(5) The escapement exit shall be of sufficient size to afford an easy passageway and, where necessary, shall be provided with good and substantial ladders from the deepest workings to the surface.

Monthly
exit
inspection

(6) The manager shall depute some competent person or persons to make an inspection of such escapement exit at least once a month.

Record of
inspection

(7) A record of such inspection and the conditions found shall be made in writing by the person making it. 1961-62, c. 81, s. 187 (3-6).

Legible
signs
showing
exits

(8) Legible signs showing the way to escapement exits shall be posted in prominent places underground and all persons employed underground shall be instructed as to the location of the escapement exits. 1961-62, c. 81, s. 187 (7), *amended*.

Buildings
in
proximity
to mine
entrance

189.—(1) Unless there is first provided a second means of exit from the mine workings, no building of other than fire-resistive construction shall be erected within fifty feet of any closed-in part of a headframe

or portalhouse, except that the fire-resistive building housing the hoist and power plant equipment may be erected within this distance so long as such distance is not less than thirty-five feet. 1961-62, c. 81, s. 188.

- (2) Where a hoist is located above the mine shaft, the supporting and enclosing structures shall be of fire-resistive material. *New.*

190. No steam boiler or diesel engine shall be installed in such a manner that any part thereof is within seventy-five feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 190.

191. No gasoline or other internal combustion engine using highly volatile liquids or flammable gases shall be installed, serviced, garaged or stored in or within fifty feet of the building housing the hoist nor within 100 feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 191, *amended.*

- 192.—(1) Except for the actual fuel tanks of operating equipment, no storage of gasoline or liquid fuel shall be permitted within 100 feet of the collar of a shaft or other entrance of a mine.

- (2) The natural drainage from such a location shall be such that the flow is in a direction opposite to the location of any such shaft or mine entrance. 1961-62, c. 81, s. 192.

- 193.—(1) Where practicable, there shall be a sufficient number of suitable fire doors installed underground to cut off the shaft and the mine openings directly associated with it from the other workings of the mine. 1961-62, c. 81, s. 195 (1), *amended.*

- (2) Fire doors shall be maintained in proper order and kept clear of all obstructions so as to be readily usable at all times. 1961-62, c. 81, s. 195 (2).

194. Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may order refuge stations to be provided and maintained at such places in the mine as he directs, and every such refuge station shall have water, air and telephone connections to the surface and be separated from the adjoining workings by closeable openings so arranged and equipped that gases can be prevented from entering the refuge station. 1961-62, c. 81, s. 196, *amended.*

Connection
between
mines

195.—(1) Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may recommend in writing to the Minister that a connection between mines be established at such places as he deems advisable and he may further recommend that such connection be so made and equipped as to constitute a refuge station or refuge stations. 1961-62, c. 81, s. 197 (1), *amended*.

Idem

(2) Upon the approval by the Minister of any such recommendation, a copy thereof, accompanied by a copy of this section, shall be served personally upon or sent by registered mail to the owner or the agent and the manager of each of the mines affected. 1961-62, c. 81, s. 197 (2).

Committee

(3) Upon the approval of such a recommendation of the chief engineer, the Minister may in writing signed by him direct each of the mining companies concerned to appoint a representative to act in its behalf on a committee under the chairmanship of a third party, who shall be a mining engineer recommended by the chief engineer and appointed to the chairmanship of the committee by the Minister, and the committee shall determine,

(a) the design, specifications and location of the connecting passages, bulkheads or other structures to be constructed in order to safeguard the present and future operations of the mines affected;

(b) the work to be done by each of the mines affected and the proportion in which the cost of the work and of establishing and maintaining the connection shall be borne by the owners or agents of the mines affected;

(c) the time at which the work in compliance herewith shall be commenced and completed;

(d) the proportion in which the costs and expenses of the committee shall be borne by the owners or agents of the mines affected; and

(e) such other provisions or requirements as in the premises they deem necessary or advisable. 1961-62, c. 81, s. 197 (3), *amended*.

- (4) The committee shall submit a report in writing to ^{Idem} the Minister, and a report of the majority of the committee shall be deemed to be the finding of the committee.
- (5) Upon the approval by the Minister of the report of ^{Idem} the committee, the chief engineer may issue his order for the establishment and maintenance of such connection and refuge station or stations (if any are recommended) in accordance with the terms of the report.
- (6) A copy of the report shall be attached to the order ^{Idem} and forms a part thereof.
- (7) No such order is subject to appeal upon any ground ^{Idem} whatsoever and is enforceable in the same manner as any order of the chief engineer. 1961-62, c. 81, s. 197 (4-7).

FIRE PROTECTION — PLANTS

- 196.—(1) Suitable fire-fighting equipment shall be pro-^{Fire-fighting}vided and maintained in or about every plant^{equipment} building. 1961-62, c. 81, s. 182 (1), *amended*.
- (2) Procedures for fighting fire in plant buildings shall be ^{Idem} drawn up and suitable signs pertaining to and excerpts from the procedures shall be kept posted in prominent places. 1961-62, c. 81, s. 174 (3), *amended*.
- (3) A properly authorized person or persons shall make a ^{Idem} monthly inspection of all fire-fighting equipment and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3).
- 197.—(1) Where an internal combustion engine is installed ^{Exhaust of internal combustion engines} at a plant, provision shall be made for safely conducting the exhaust of such engine to a point well outside the building. 1961-62, c. 81, s. 192 (1), *amended*.
- (2) The exhaust shall be so arranged as to avert the ^{Idem} possibility of fumes re-entering the building or entering the intake of an air compressor or contaminating the atmosphere of any adjacent buildings or mine workings. 1961-62, c. 81, s. 192 (2).

Transfer of
liquid
fuel

198.—(1) The fuel tanks of an internal combustion engine installed in a building shall be so arranged that the actual transfer of fuel to the fuel tank takes place at a point outside the building and the fuel is conducted to the tank in a tightly-jointed pipe or conduit.

Idem

(2) Similar provisions for the escape of displaced air from the fuel tank shall be made whereby the displaced air will be conducted to a safe point outside the building before being discharged into the atmosphere. 1961-62, c. 81, s. 194 (1, 2).

Dangerous
materials

199. Any dangerous, flammable or explosive material or substance in a solid, liquid or gaseous state or any combination of them, other than manufactured explosives and blasting agents, that is kept, stored or handled, in a plant,

(a) shall be kept in a container that is suitable having regard to the nature and state of the material or substance; and

(b) shall be kept apart or insulated from any reasonably foreseeable source of ignition or from temperatures likely to cause combustion,

and where the material or substance is kept, stored or handled for a purpose other than immediate use, it shall be kept, stored or handled,

(c) outside any building;

(d) in a building not used for any other purpose;
or

(e) in a fire-resistive compartment satisfactory to the district mining engineer as to location and construction. *New.*

Exits

200.—(1) All plant buildings, except those used for the storage of explosives and blasting agents, shall be provided with adequate and properly maintained means of egress, convenient to and having easy communication with all rooms, regularly occupied by a person, including,

(a) tower stairs of fire-resistive construction equipped with fire-resistive doors and hardware, satisfactory to an engineer, at each storey including the basement; and

- (b) where permitted by an engineer, metal or other non-combustible fire escapes consisting of exterior stairways with railings and with landings at each storey connecting directly with the interior of the building through metal or other fire-resistive doors.
- (2) No means of egress from a plant building shall be obstructed and no door to a fire escape, tower stair or other smoke-proof enclosure shall be prevented from closing or remaining closed. ^{Idem}
- (3) Notwithstanding that a door is locked to prevent ingress to a building or room, the door shall be deemed to be not locked, bolted or barred if it is provided with a mechanism for unlocking it quickly from the inside that requires no special skill, effort or previous knowledge for its operation. *New.* ^{Idem}

201. Where,

Dangerous
material

- (a) any grinding, polishing, screening or other process is likely to produce dust or other particles of such size or character and to such an extent as to be capable of producing a flammable mixture; or
- (b) any mixing, handling, dispensing or storage of any material is likely to produce a gas, vapour or mist of such character and to such extent as to be capable of producing a flammable mixture,

all practicable steps shall be taken to,

- (c) enclose the equipment used in the process;
- (d) prevent or remove any accumulation of dust, vapour, gas or mist that may escape from the enclosure;
- (e) exclude or effectively enclose all potential sources of ignition of the flammable mixture;
- (f) restrict the spread and effects of any burning or explosion by the provision of vents, baffles and chokes or other devices satisfactory to an engineer; and

- (g) when so directed by an engineer create and maintain an inert atmosphere in contact with dust or other particles mentioned in clause *a* or mixed with the gas, vapour or mist mentioned in clause *b*. *New.*

AID TO INJURED

Stretchers

- 202.—(1) At every mine or plant, there shall be maintained a sufficient number of properly-constructed stretchers for the proper handling and transporting of persons who are injured.

First aid supplies

- (2) There shall be provided and maintained at every mine or plant, for the treatment of any person injured, such personnel, equipment and vehicles and such first-aid supplies as are required by the regulations under *The Workmen's Compensation Act. 1961-62*, c. 81, s. 198, *amended.*

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ENVIRONMENTAL CONDITIONS

SANITATION — MINES

Sanitary
con-
veniences,
mines

203. There shall be provided in the workings of a mine suitable sanitary conveniences in accordance with the following requirements:

1. Where persons are employed underground, one sanitary convenience for every twenty-five persons or portion thereof on any shift.
2. The sanitary conveniences mentioned in item 1 shall be conveniently placed, having regard to the number of persons employed on the different levels, in a well-ventilated part of the mine.
3. Where persons are employed at an open pit or a clay, sand or gravel pit or quarry, one sanitary convenience and one urinal for every twenty-five persons or portion thereof on any shift.
4. The sanitary conveniences mentioned in items 1 and 3 shall be kept clean and sanitary and the content disposed of regularly. 1961-62, c. 81, ss. 206, 207, *amended.*



Idem

204. Any person depositing faeces in any place underground, other than in a sanitary convenience provided, is guilty of an offence against this Act. 1961-62, c. 81, s. 208.

Drinking
water

- 205.—(1) A supply of potable water shall be provided in mine workings on surface and at points underground

reasonably accessible to the working places. 1961-62, c. 81, s. 209, *amended*.

-  (2) All locations where a supply of potable water is provided shall be kept in a clean and sanitary condition. ^{Idem}
- (3) (a) The manager shall provide underground, ^{Lunchrooms} where more than fifteen persons congregate to eat, an area or places sufficiently large to accommodate all such persons.
- (b) Every such area or place shall be adequately ^{Idem} heated and ventilated and shall be provided with an adequate supply of warm water, soap and paper towels.
- (4) All supplied potable water in a mine shall be governed ^{Standard of drinking water} by the standard of drinking water objectives set by the Ontario Water Resources Commission.
- (5) Wherever, at a pit or quarry, the facilities referred to in subsection 1 of section 206 are located at a distance from the place of work, adequate transportation shall be provided. ^{Transportation to washing facilities} *New.* 
- 206.—(1) If persons are employed underground or in hot or dusty occupations on surface at a mine, suitable and sufficient accommodation, including supplies of clean, cold and warm water for washing themselves, shall be provided above-ground near the principal entrance of the mine to enable such persons to conveniently dry and change their clothes. ^{Dressing rooms}
- (2) Such accommodation, unless of fire-resistive construction, shall not be nearer than fifty feet to a shafthouse or portalhouse and it shall not be located in a hoistroom or boilerhouse unless a separate, properly-constructed room is provided. 1961-62, c. 81, s. 210, *amended*. ^{Idem, location}

SANITATION — PLANTS

- 207.—(1) There shall be provided in every plant suitable, ^{Sanitary conveniences, plants} separate wash and toilet rooms for male and female persons that are conveniently accessible and in accordance with the following requirements:
1. Where fewer than six persons are employed, a room containing a wash basin and a flush toilet and having a door that has a locking device on the inside.
 2. Where six or more persons are employed, there shall be provided for the number of

employees of each sex in a group itemized in column 1 of the Table not less than the number of separate flush toilets and separate wash basins for each sex opposite thereto in column 2.

TABLE

Item	COLUMN 1		COLUMN 2	
	No. of male Employees	No. of female Employees	No. of	
			Toilets	Wash-basins
1	1 to 9	1 to 9	1	1
2	10 to 24	10 to 24	2	2
3	25 to 49	25 to 49	3	3
4	50 to 74	50 to 74	4	4
5	75 to 100	75 to 100	5	5
6	Over 100	Over 100	Add one toilet and one wash basin for each additional thirty employees or fraction thereof.	

3. Notwithstanding item 2,

- i. in toilet rooms for more than nine male employees, urinals shall be substituted for not less than one-quarter and not more than one-half of the number of flush toilets required by item 2, or
- ii. in toilet rooms for more than nine female employees, urinals may be substituted for not more than one-half of the number of flush toilets required by item 2.

4. Subject to item 3, urinals or wash fountains in straight trough form and wash fountains in circular form may be provided in lieu of toilets or wash basins, as the case may be, and,

- i. where a circular wash fountain is provided, each twenty inches of its circumference is deemed to be the equivalent of one wash basin, and
- ii. where a urinal or wash basin in straight trough form is provided, each twenty-

four inches of its length is deemed to be the equivalent of one toilet or one wash basin, as the case may be.

- (2) Where wash fountains or wash basins are provided, ^{Wash basins} they shall be supplied with hot and cold water from taps or outlets that are satisfactory to an engineer.
- (3) Water for washing purposes, ^{Hot water}
 - (a) shall not exceed 140° Fahrenheit at any outlet; and
 - (b) shall not be mixed directly with steam.
- (4) Where the municipality in which the plant is located ^{Where privies permissible} is not serviced by a water or sewage system and flush toilets cannot be provided, privies or other toilets satisfactory to an engineer shall be provided.
- (5) Every toilet for employees and every urinal for ^{Requirements for toilets} female employees shall occupy an individual compartment with a suitable door and lock and the compartment shall have a length of not less than four feet six inches and a width of not less than two feet eight inches.
- (6) The height of any compartment door, wall or partition between toilets for employees and between urinals for female employees may be less than the height of the room but the top of the door or partition shall be not less than five feet six inches from the floor and the bottom not more than one foot from the floor. ^{Idem}
- (7) Every compartment shall be supplied with a clothes ^{Idem} hook.
- (8) Every toilet room and washroom shall be adequately ^{Lighting} lighted and kept in good repair and in a sanitary condition.
- (9) Toilets, urinals and other sanitary conveniences shall ^{Repair} be kept in good repair and in a sanitary condition.
- (10) Toilet rooms and washrooms shall, ^{Requirements for toilet rooms and washrooms}
 - (a) have legible signs indicating for which sex the room is provided and be constructed so as to prevent a view of the facilities from outside

the room and so as to prevent, as far as is practicable, accidental entry into the room by a person of the opposite sex;

- (b) have provided and maintained for the use of persons a convenient and sufficient supply of clean towels or suitable air dryers, soap or other suitable cleansing agent, toilet paper and in each toilet room used by females a suitable covered receptacle;
- (c) be, where separated, adjacent and connected with a door or doorway;
- (d) have a ceiling height of not less than eight feet with the enclosing walls extended to the ceiling and constructed of material impervious to liquid to a height of not less than four feet;
- (e) have mechanical exhaust to the outdoors at a volume of not less than two cubic feet per minute for each square foot of the floor area of the room, or that have windows or skylights so constructed that, for each toilet and for each urinal in the room, not less than two square feet of the window or skylight can be opened;
- (f) have an opaque window or skylight where necessary to ensure privacy;
- (g) have smooth floors of terrazzo, vitrified tile, mastic tile, asphalt or other equally non-absorbent, easily cleaned material. *New.*

Drinking
water

208. There shall be provided:

1. A supply of potable water in a place where the tap or outlet is distant from any sanitary convenience and, where the supply is not taken directly from a water pipe, the supply shall be contained in a covered vessel having a drain faucet and shall be renewed at least daily.
2. Where the potable water is not delivered in an upward jet from which the employees can

conveniently drink, a sufficient supply of individual drinking cups located near the tap or outlet.

3. Except where otherwise permitted by an engineer, at least one tap or outlet for drinking water on every floor where work is regularly performed and within 300 feet of every employee's normal work station.

4. All supplied potable water in a plant shall be governed by the standards of drinking water objectives set by the Ontario Water Resources Commission. *New.*

209. There shall be provided:

Change
rooms

1. Such dressing rooms as an engineer may direct.
2. Suitable accommodation for clothing not worn by employees during working hours and for work clothes that must be kept separate from street clothes because of the presence of poisonous, irritating or infectious materials.
3. Where necessary, adequate facilities for drying work clothes.

210.—(1) The manager shall provide on surface, where ^{Lunch areas} more than fifteen persons congregate to eat, an area or places sufficiently large to accommodate all such persons together with equipment satisfactory to an engineer.

- (2) The employer shall ensure that no person takes food ^{Idem} into or eats in a room, area or place where any poisonous substances are exposed or where deleterious vapours, mists, fumes, dust or gases are known to be present or any room, area or place designated by an engineer, and shall ensure that potable water in any such room, area or place is taken directly from a water pipe or fully enclosed container.

- (3) No person shall take food into or eat in a room, area ^{Idem} or place referred to in subsection 2. *New.*

211. An engineer may, with respect to a plant in operation ^{Existing plants} before the requirements of sections 207 to 210 came into force, permit the continued use of such sanitary facilities satisfactory to him that are in use therein notwithstanding that such facilities do not comply with the requirements of the said sections. *New.*

Lighting

212. Wherever persons are required to work in a plant, suitable natural or artificial lighting without unnecessary glare or shadows, shall be provided and maintained and where necessary be sufficient to enable a person with normal vision to read dials on control panels or typewritten orders and instructions without eye strain. *New.*

VENTILATION AND DUST CONTROL — MINES

Pure air required

- 213.—(1) The ventilation in every mine shall be such that the air in all of its workings, which are in use shall be free from dangerous amounts of noxious impurities and shall contain sufficient oxygen to obviate danger to the health of anyone employed in the mine.

Mechanical ventilation systems

- (2) In mine workings where air as described in subsection 1 cannot be obtained by natural ventilation, approved means for mechanical ventilation shall be provided and kept in operation until the workings have been abandoned or until satisfactory natural ventilation has been brought about therein. 1961-62, c. 81, s. 203 (1, 2), *amended.*

Use of fans

- (3) All structures containing fans used in connection with the underground ventilation of a mine shall be constructed of fire-resistive materials. 1961-62, c. 81, s. 203 (3). *amended.*

Heating mine air

- (4) Any proposed method of heating the underground mine ventilating air shall be submitted for approval to the district electrical-mechanical engineer.

Direct-fired heaters

- (5) Any proposed method of heating air at a mine, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer. *New.*

Underground workings, examination of air

- (6) Underground workings that are not in a positive ventilation circuit shall be examined before being used in order to ascertain whether dangerous gases have accumulated there or whether an oxygen deficiency exists, and only such persons as are necessary to make the examination shall be allowed to proceed to such places until the workings are safe to work or travel in.

Idem

- (7) Such workings shall be barricaded off and posted with signs which warn persons of the hazard.

Idem

- (8) Only authorized persons shall enter such posted workings. 1961-62, c. 81, s. 204, *amended.*

- (9) No internal combustion engine shall be installed or operated in a shaft or adit or in any working in connection with a shaft or adit unless permission in writing from the chief engineer is first obtained. 1961-62, c. 81, s. 205 (1). Internal combustion engine underground
- (10) Every place in a mine, where drilling, blasting or other operations produce dust in dangerous quantities, shall be adequately supplied at all times with clean water under pressure or other approved appliance for laying, removing or controlling dust. Keeping water supply to lay dust
- (11) A development heading, such as a drift, cross-cut, raise or sub-drift, shall be furnished with an approved water blast which shall discharge within an effective distance of the face being advanced and shall be applied so as to wet the area for at least fifteen minutes after blasting, and, if such area is not thoroughly wetted prior to the entry of any person it shall be wetted down as soon as possible. 1961-62, c. 81, s. 280 (1, 2). Approved water blast
- (12) A fresh air supply independent of the air supplied to any machine or drill used therein shall be provided, Auxiliary air supply
- (a) in every raise;
 - (b) in every sub-drift over twenty-five feet in length; and
 - (c) in every stope with one entry and no through ventilation,
- and such fresh air supply shall be controlled outside or at the beginning of the heading, and the air shall be turned on by the blaster after he has detonated any blast in the heading. 1961-62, c. 81, s. 280 (3), *amended*.
- (13) Before returning to the scene of a blasting operation, every person shall assure himself that sufficient air has been introduced into the working place to drive out or dilute to a safe degree the gases produced in the blasting operation. 1961-62, c. 81, s. 249, *amended*. Ventilation of working places after blasting
- (14) The times for blasting shall be so fixed that persons shall be exposed as little as practicable to dust and smoke. 1961-62, c. 81, s. 281, *amended*. Time for blasting

VENTILATION AND DUST CONTROL — PLANTS

Pure air
required

- 214.—(1) There shall be provided a positive supply of fresh air into, and provision for the removal of vitiated air from, a plant building that is sufficient to keep the air reasonably pure and to render harmless, so far as is reasonably practicable, all gases, vapours, dusts or other impurities that are likely to endanger the safety of any person therein.

Heating

- (2) The temperature of all plant buildings in which persons are normally required to work shall be regulated so as to be suitable for the work to be performed therein, and so as to be not likely to endanger the safety of any person. *New.*

Direct-fired
heaters

- (3) Any proposed method of heating air at a plant, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer.

Mechanical
ventilating
systems

- (4) There shall be provided and used, where a process is carried on that produces a gas, vapour, dust or other impurity that is likely to be inhaled to an injurious extent by persons in the plant building, such mechanical means satisfactory to an engineer, as are capable of,
- (a) preventing, as far as is reasonably practicable, such inhalation;
 - (b) effectively carrying off and disposing of such gases, vapours or dusts; and
 - (c) preventing, as far as is reasonably practicable, the recirculation and re-entry of air containing such impurities.

Personal
protective
equipment

- (5) Where required, suitable personal protective equipment shall be worn by any person exposed to any hazard mentioned in subsection 4.

House-
keeping

- (6) Any place in a plant where dust may accumulate shall be regularly cleaned by vacuum, wet sweeping, wet shovelling or other method that reduces the dissemination of dust into the atmosphere.

Abrasive
blasting

- (7) Abrasive blasting or other like operations inside a plant shall be conducted inside an enclosure so constructed and ventilated as to effectively prevent dust from entering the atmosphere of a plant building,

(a) if this is impracticable; or

- (b) where the operation is likely to produce silica or other harmful dusts in the atmosphere of the plant,

the person conducting the operation and other persons in the affected area shall wear suitable breathing apparatus.

- (8) Suitable precautions shall be taken to ensure that any tank, vat, chamber, pit, pipe, flue or confined space in a plant that may be entered by any person, ^{Confined spaces and tanks}

- (a) has a suitable man-hole or other means of easy egress from all accessible parts of the confined space; and

- (b) is safe for entry.

- (9) Any container referred to in this section shall be tested by a qualified person, who shall record the result of each test conducted by him, and these records shall be available to an engineer. ^{Containers}

- (10) Where any container referred to in this section has been tested and found, ^{Idem}

- (a) unsafe for entry; or

- (b) safe for entry, but may thereafter become unsafe to remain in or enter,

no person shall enter or be allowed to enter or remain in such container unless,

- (c) the person is using a suitable breathing apparatus and wearing a safety belt or safety harness, the free end of the rope of which is held by a person, equipped with a suitable alarm, who is keeping watch outside the container and who is capable of pulling the person from the confined space; and

- (d) the person entering the container is using such other equipment necessary to ensure his safety; and

- (e) there is conveniently available a person adequately trained in artificial respiration. *New.*

PROTECTION IN MINES AND PLANTS

- 215. Where any gas, liquid, vapour or dust is at a pressure other than atmospheric pressure, no person shall open or be allowed to open its container unless, ^{Dangerous pressures}

- (a) before any fastening of the container and of any container connected therewith is loosened, any flow into or out of such container is effectively stopped; and
- (b) before any fastening of the container is removed, all practicable steps are taken to adjust the pressure of gas, vapour, liquid or dust in the container so that the pressure equals atmospheric pressure,

and if any such fastening has been loosened or removed, it shall be securely replaced before any gas, vapour, liquid or dust is permitted to enter the container.

Plastic
piping

216. The installation of plastic pipe used with a pressure in excess of 50 pounds per square inch shall be approved by the district engineer. *New.*

Transfer of
liquids or
solids by
compressed
air

217. The transfer of liquids or solids, including fuels, from one location or container to another location or container by the application of air under pressure shall not be permitted, except where properly-designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 431, *amended.*

PROTECTION IN PLANTS

Open tanks,
vats, etc.

- 218.—(1) Every tank, vat or other container for holding a liquid, the top edge of which is less than three feet six inches above the highest floor, ground or platform from which a person might fall into it, shall be securely covered or securely fenced to at least three feet six inches above such floor, ground or platform.

Silos,
hoppers
etc.

- (2) Every silo, bin, hopper or other container or structure that is constructed to discharge from the bottom dry bulk material contained or stored in it, shall have the top of the silo, bin, hopper, structure or container,
- (a) provided with a solid cover; or
 - (b) guarded with a metal grating or bars; or
 - (c) traversed by a gangway; or
 - (d) encircled or encompassed at its perimeter by a floor or platform.

- (3) Where, in the opinion of an engineer, the provisions of subsection 1 or 2 are not practicable, other practicable means satisfactory to the engineer shall be taken to prevent any person from falling into the container. Other safety precautions
- (4) Any stair, gangway or platform above, across, inside or outside a container referred to in subsection 1 or 2 shall be, Gangways, etc.
- (a) at least twenty-two inches wide;
 - (b) provided with an upper rail and either an intermediate rail and toe board or equivalent protection on both sides to a height of not less than three feet six inches; and
 - (c) securely fixed.
- (5) Any covering, fencing, stair, gangway or platform mentioned in this section shall be maintained in a safe condition. Duty to maintain
- (6) No person shall enter or be allowed to enter or remain in any silo, bin, hopper, or other container or structure for containing or storing bulk material unless, Precautions on entry
- (a) all further supply of material thereto is stopped and proper precautions are taken to prevent any further supply; and
 - (b) the person is wearing a safety belt or safety harness, and at least one other person, equipped with a suitable alarm, is in constant attendance, outside the container, who is capable of rendering any necessary assistance.
- New.*
- 219.—(1) Before any person is allowed to work on a stock pile of ore, limestone, coke or other material, the stock pile shall be inspected by some authorized person whose duty it is to see that it is in a safe working condition. 1961-62, c. 81, s. 436, *amended*. Inspection of stock pile
- (2) No person shall work or be allowed to work on or near any bulk material that is packaged or other material that is so piled and disposed as to be likely to endanger his safety. *New*. Working near bulk materials
- (3) There shall be provided two exits from a tunnel under a stockpile. *New*. Exits from tunnels under stockpiles

Protection
from
overhead
operations

220. No person shall be employed in a location where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, *amended*.

Passage-
ways

- 221.—(1) All passageways and other walking surfaces in a plant shall be maintained in a safe condition and free from obstructions and shall be of sufficient size to ensure that crowding, that is likely to endanger the safety of persons therein, does not occur.

Floor
openings

- (2) Every opening in a floor or other surface in a plant building that may be used by a person shall be,
- (a) protected by a guardrail; or
 - (b) covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

Safe floor
loading

- (3) The maximum safe load that a floor or roof of a plant is capable of bearing shall be conspicuously marked or posted to the satisfaction of an engineer when so directed by him.

Ladders

- (4) Except for approved access ladders to equipment, no ladder shall be installed in a plant at an inclination of more than 70 degrees to the horizontal. *New*.

Antidotes
and
washes

- 222.—(1) At every plant where poisonous or dangerous compounds, solutions or gases are used or produced, there shall be kept in a conspicuous place, as near the compounds, solutions or gases as is practicable, a sufficient supply of satisfactory antidotes and washes, and there shall be installed eye wash fountains and, where necessary, safety showers, for treating injuries received from such compounds, solutions or gases.

Idem

- (2) Such antidotes and washes shall be properly labelled and explicit directions for their use affixed to the boxes containing them. 1961-62, c. 81, s. 427, *amended*.

Storage,
production,
etc., of
acids,
poisons

- 223.—(1) Where an acid or poisonous compound or any other material that is likely to endanger the health of an employee is produced, transferred, used or stored in a plant, due provision shall be made to reduce to a minimum the hazard of handling or storing such material.

Personal
protective
equipment

- (2) Where the provisions taken under subsection 1 do not remove the hazard, personal protective equipment shall be worn by the person exposed to the hazard.

- (3) Where such material is present, there shall be posted ^{Notice} in a conspicuous place, when so required by the chief engineer, notices stating the dangers involved and the precautions to be taken.
- (4) Where required, the employer shall provide the ^{Information} chief engineer with accurate information regarding the percentage of any harmful ingredient in such material.
- (5) Any person who, for use in a plant, manufactures, ^{Labels} distributes or purchases any material that contains benzol, carbon tetrachloride, lead or other ingredient that is deemed dangerous to health by the chief engineer, shall indicate the presence of such ingredient by a label lettered in legible type, distinctly visible and affixed to each package or container thereof.
- (6) The chief engineer, on the advice of the director of ^{Medical examination} the Environmental Health Branch of the Department of Health, may require at specified intervals by qualified physicians and at the expense of the employer a physical examination of any person employed in a plant having a process that the chief engineer considers is likely to endanger such person's safety, and the physician shall forthwith send or cause to be sent to such director a report of the examination in a form suitable to the chief engineer.
- (7) The examination required under subsection 6 shall be ^{Idem} prescribed by such director and may include an x-ray examination and blood or other tests. *New.*

HANDLING MOLTEN MATERIALS

- 224.—(1) Persons employed in a plant in the handling of ^{Shields for protection against burning} molten materials shall be supplied with suitable shields and appliances to protect them as far as possible against being burned.
- (2) It is the duty of all such persons to use the shields ^{Idem} and appliances. *New.*
- 225.—(1) There shall be maintained in readily accessible ^{Rescue apparatus} places at all plants, where the atmosphere may contain dangerous concentrations of poisonous gases or vapours, detection equipment, breathing apparatus and portable resuscitating apparatus of approved type, with an adequate supply of material for the proper operation of the apparatus.

Trained
personnel

- (2) There shall also be on duty in each working shift one or more persons appointed by the manager and trained in the use of breathing and resuscitating apparatus. 1961-62, c. 81, s. 451, *amended*.

Scale cars

226. Each scale car shall be provided with an audible warning alarm that shall be sounded by the operator each time a car is started, or each car shall be equipped with an automatic mechanical warning alarm that will sound when the car is moved. 1961-62, c. 81, s. 437.

Pouring of
hot
materials

- 227.—(1) Every effort shall be made to prevent molten material from coming into accidental contact with cold, damp or rusty surfaces where such contact may cause an explosion. 1961-62, c. 81, s. 438 (2).

Examina-
tion of
moulds,
etc.

- (2) Every ladle or slag pot shall be examined before molten material is placed therein. 1961-62, c. 81, s. 438 (1).

Filling of
moulds,
etc.

- (3) When molten material is transported by mechanical means in ladles or slag pots and the safety of persons may be endangered from splashing, every effort shall be made to ensure that the ladles or slag pots are not filled above a point four inches below the top of the ladle or slag pot.

Idem

- (4) If such limit is exceeded, the ladle or slag pot shall not be moved until the supervisor or other responsible person has warned the persons required to handle the ladle or slag pot of this condition and has warned all other persons in the vicinity. 1961-62, c. 81, s. 439, *amended*.

Slag pit

- (5) The shovel operator shall obtain authorization from the supervisor or other person in charge of a blast furnace before commencing to dig the slag pit. *New.*

Blast
furnaces

- 228.—(1) Whenever it becomes necessary for a person to go above the casting floor of an operating furnace, excepting the access to the crane cab or runway and not adjacent to the furnace and having direct egress to the outside, such person shall notify the foreman, or other responsible person, who shall see that there is always a second person in attendance whose duty it is to remain outside the gaseous area and act as a watcher and give the alarm to the casthouse or stockhouse and render every possible assistance in case of gassing or other danger. 1961-62, c. 81, s. 444, *amended*.

- (2) Safety belts shall be provided and maintained in a readily accessible place for immediate use in case it becomes necessary to rescue a person from the top structure of a furnace or the ancillary equipment in a plant. *New.* Safety belts
- (3) All bustle pipes shall be provided with safe working platforms equipped with hand-rails at least three feet six inches in height and, wherever practicable, the platform shall not rest directly on the bustle pipe, but shall be supported on angle bars, so that the floor plate will not become sufficiently hot to cause burns to a person falling on it. 1961-62, c. 81, s. 445 (1), *amended.* Protection from bustle pipes
- (4) Access to the platform shall be by a stairway provided with hand-rails. 1961-62, c. 81, s. 445 (2). Idem
- (5) A suitable line of communication by telephone, gong, or other mechanical means, shall be maintained between the furnace top, and all other dangerous places, to the cast-house, skip operator's room or other place where persons are continuously on duty. 1961-62, c. 81, s. 446, *amended.* Line of communication
- (6) A suitable ladderway or stairway shall be provided from the foundation to the top of the furnace. 1961-62, c. 81, s. 447. Stairways and ladderways
- (7) Unless an approved type of elevator is provided as a means of travel to the furnace top, stairways shall be installed at an angle not greater than 50 degrees from the horizontal and shall be provided with landings or turnouts at intervals of not more than twenty-five feet, measured on the slope, so that it will not be possible for a person to fall from the top to the foundation below. 1961-62, c. 81, s. 448, *amended.* Stairways protected
- (8) When ore becomes frozen or jammed in the furnace hopper or bell and a person is required to bar the ore into the furnace, a suitable guard-rail shall be provided to prevent the person from slipping on to the bell. 1961-62, c. 81, s. 450, *amended.* Protection around bell
229. Every supervisor shall personally attend, or appoint a competent person to supervise, any work around a blast furnace in a plant that involves unusual accident hazard, such as, Supervision of hazardous work around furnaces
- (a) work in gas mains or cleaners, tearing out linings, relining, work in the casthouse, work about the stoves, when blowing in or blowing out, and any work about the bells or stock line;

- (b) when the furnace is known to be hanging and liable to slip, he shall see that no person is allowed on top for any purpose; or
- (c) when work beyond that of normal inspection and minor maintenance is to be conducted at the furnace top structure,
 - (i) the blast furnace shall be shut down and the area cleared of operating personnel,
 - (ii) the proper work order shall be obtained from the supervisor,
 - (iii) before the repair work is begun, the area shall be tested for toxic gas and such tests shall be continued as necessary for the protection of the personnel,
 - (iv) breathing apparatus, safety ropes and any additional rescue equipment as necessary shall be available. 1961-62, c. 81, s. 449, *amended*.

HAULAGE — ON SURFACE AND UNDERGROUND

Interpre-
tation

230.—(1) In this Part,

- (a) “locomotive” means a motor vehicle which only operates on rails;
- (b) “motor vehicle” means a truck, automobile or any other vehicle propelled or driven otherwise than by muscular power, and includes trackless haulage equipment;
- (c) “vehicle” includes a motor vehicle and every vehicle drawn or propelled by muscular power.

Warning
equipment

- (2) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a suitable audible signal that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (1), *amended*.

Warning
equipment
to be used



- (3) The audible signal on a locomotive or motor vehicle shall be sounded where practicable when the vehicle starts to move in an enclosed building at a mine or plant or underground at a mine and at such other times as a warning of danger is required. 1961-62, c. 81, s. 299 (1), *amended*.

Warning
device for
backing up

- (4) Every motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped,



where practicable, with a suitable warning device which will operate automatically when the motor vehicle starts to move in reverse. *New.*

- (5) (a) Except when used in adequately lighted buildings or areas, every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a headlight or headlights that shall be maintained in proper working condition, and motor vehicles used for trackless haulage shall be equipped with a suitable tail-light or tail-lights that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (2). ^{Headlight and tail-light}

-  (b) When a motor vehicle is disabled, when lighted lamps are required, and is located on the travel portion of the roadway, suitable flares, reflectors or lamps shall be placed to give adequate warning. *New.* ^{Disabled vehicle} 

- (6) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with suitable brakes. *New.* ^{Brakes}

- (7) No locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be operated unless the brakes, steering, audible signals, lights and rear-vision mirrors, where applicable, are in satisfactory condition. *New.* ^{Operating equipment to be in satisfactory condition}

-  (8) Whenever the face of a main ramp or inclined tunnel in a mine exceeds a vertical depth of 300 feet without intermediate access to the ramp or tunnel from an operating shaft or winze a suitable approved vehicle shall be provided to transport persons down and up the ramp or tunnel. *New.* 

- 231.—(1) The control levers of storage battery and trolley locomotives used on surface at a mine or plant or underground in a mine shall be so arranged that the lever cannot accidentally be removed when the power is on. 1961-62, c. 81, s. 298. ^{Control levers}

- (2) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be moved under its own power unless where it is manually operated, the operator is in proper position at the controls or, where it is operated by a remote control or automated system, the system is approved by the chief engineer. *New.* ^{Control systems}

- (3) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be left ^{Unattended locomotives}

unattended unless the controls have been placed in the safe position for parking and the brakes have been set. 1961-62, c. 81, s. 302.

Guard to
protect
motorman

- (4) The operating platform of a locomotive used on surface at a mine or plant or underground in a mine shall be provided with a suitable seat and an adequate guard for the protection of the motorman. 1961-62, c. 81, s. 299 (3), *amended*.

Wheel
chocks

- 232.—(1) Motor vehicle haulage equipment used on surface at a mine or plant or underground in a mine shall carry, where practicable, wheel chocks to be used to block movement on slopes when the equipment is left unattended or is undergoing maintenance.

Safety
support for
truck boxes

- (2) Every motor driven dump truck used on surface at a mine or plant or underground in a mine shall be equipped with a suitable safety support device, which shall be used when repairs or maintenance are conducted under a raised box. *New*.

Prohibitions
around
moving
machines

- 233.—(1) No operator shall leave the controls of his vehicle or machine unattended on surface at a mine or plant or underground in a mine while,

- (a) the bucket of a front end loader, backhoe or other excavating machine;
- (b) the blade of a bulldozer; or
- (c) the load of a fork-lift truck, crane or other hoisting machine,

is in a raised position, except when it is suitably and safely supported.

Idem

- (2) No person on surface at a mine or plant or underground in a mine shall be under any part of a motor vehicle or other equipment in which the lowering of that part may endanger the person unless that part is safely blocked in such a way as to prevent its lowering.

Idem

- (3) No person on surface at a mine or plant or underground in a mine shall operate a crane or other hoisting machine in such a way that any part of its load may pass over a person other than the person receiving the load.

Idem

- (4) A person on surface at a mine or plant or underground in a mine receiving a load shall so far as is practicable position himself so that the load does not pass over him.

- (5) No person on surface at a mine or plant or under-^{Idem} ground in a mine shall operate a shovel, backhoe or similar excavating machine in such a way that it or any part of its load may pass over a person.
- (6) No person on surface at a mine or plant or under-^{Idem} ground in a mine shall remain on or in a motor vehicle where he might be endangered during the loading or unloading of the vehicle.
- (7) Where a motor vehicle on surface at a mine or plant or underground in a mine is being backed up in a location where a person may be endangered by the vehicle backing up or where the driver may be endangered, another person shall be stationed to direct the driver in backing up the vehicle. ^{Idem} *New.*

- 234.—(1) (a) Except for standard gauge track on surface, ^{Track condition} every switch in a track on surface at a mine or plant or underground in a mine shall have the frog and guard rail entrances provided with a guard block if its construction is not such that the hazard of a person's foot being caught in it is reduced to a minimum.
- (b) Standard gauge track on surface at a mine or ^{Standard gauge track} plant shall be installed and maintained as called for in the Uniform Code of Operating Rules prescribed by the Transport Commissioners for Canada. *New.*
- (2) All tracks in use on surface at a mine or plant or ^{Maintenance of tracks} underground in a mine shall be maintained in good working condition. 1961-62, c. 81, s. 409, *amended.*

HAULAGE — UNDERGROUND

- 235.—(1) In motorized haulage underground in a mine, ^{Tail-light on trains} a suitable tail-light shall be used in conjunction with made-up trains. 1961-62, c. 81, s. 299 (2), *amended.*
- (2) Every self-propelled unit of trackless haulage equipment used underground in a mine shall be equipped ^{Lights to show width of vehicle} with suitable lights or reflectors that show in the direction of travel the width of the vehicle. 1961-62, c. 81, s. 297 (3).
- 236.—(1) In motorized haulage in any level, drift or ^{Riding on vehicles prohibited} tunnel in or about a mine, no unauthorized person shall ride on any vehicle. 1961-62, c. 81, s. 300 (1), *amended.*
- (2) Special trips for persons only shall be made on ^{Idem} approved vehicles. 1961-62, c. 81, s. 300 (2).

Emergency
exit

- (3) Every vehicle in which any person may ride shall be equipped with an emergency exit. *New.*

Clearance
and safety
stations

- 237.—(1) On every level of a mine on which motorized track haulage is employed, a clearance of at least eighteen inches shall be maintained between the sides of the haulageway and the cars or locomotive, or there shall be a clearance of twenty-four inches on one side, or safety stations shall be cut every 100 feet. 1961-62, c. 81, s. 301 (1), *amended.*

Idem,
marking

- (2) Such safety stations shall be plainly marked. 1961-62, c. 87, s. 301 (2).

Clearance
for trackless
haulage

- (3) On every level of a mine on which motorized trackless haulage equipment is employed, a minimum total clearance of five feet shall be maintained between the sides of the haulageway or workings and the motorized equipment.

Idem, plus
pedestrian
travel

- (4) On every level of a mine regularly used both for pedestrian traffic and motorized trackless haulage where there is a total minimum clearance of less than seven feet between the sides of the haulageway and the vehicle, safety stations shall be cut at intervals not exceeding 100 feet and they shall be plainly marked. 1961-62, c. 81, s. 301 (3, 4), *amended.*

Travelways
clear of
obstructions

- (5) All regular travelways in or about a mine shall be maintained clear of debris or obstructions that are likely to interfere with safe travel. 1961-62, c. 87, s. 301 (5).

HAULAGE — ON SURFACE

Guard-rails
at track
approaches

- 238.—(1) Guard-rails shall be placed at the approach to tracks on surface at a mine or plant where motorized haulage is used and where the view of the tracks is obstructed in one or both directions.

When im-
practical

- (2) Where restricted clearances make the use of guard-rails impractical in the opinion of the district mining engineer, he may permit such guard-rails to be omitted but shall require that there be installed at the track approaches a suitable type of warning signal that will automatically give adequate, audible and visible warning at all times of the approach of the conveyance, or that a switchman shall walk ahead of the leading conveyance on the track when the conveyance is in dangerous proximity to the area requiring guarding and stand guard at such approaches. 1961-62, c. 81, s. 434, *amended.*

- 239.—(1) Where motorized haulage is used on surface at a mine or plant and the clearance between the sides of conveyances on parallel tracks or between the sides of conveyances and the side of a building or other structure is less than eighteen inches, the location shall be plainly marked showing the danger. 1961-62, c. 81, s. 440, *amended*. Side clearance,
haulage
- (2) At the approach to an overhead bridge, pipe line or a similar structure on a standard-gauge railway track at a mine or plant where the clearance is less than six feet between the top of a railway car and the underside of the structure, a “low bridge” warning device shall be installed. 1961-62, c. 81, s. 441, *amended*. Overhead hazards
- (3) Where the operator may be exposed to overhead hazards at a mine or plant, a cab, screen or other adequate overhead protection shall be provided on, Overhead hazards
- (a) a power-driven crane, shovel or similar machine;
 - (b) a fork-lift truck; and
 - (c) a front-end loader or other excavating machine. *New*.
240. Motor vehicles operating on surface at a mine shall be equipped, where practicable, with rear-vision mirrors. *New*. Rear-vision mirrors

PROTECTION FROM MACHINERY — MINES AND PLANTS

241. In this Part, Interpretation
- (a) “lifting device” means a device that is used to raise or lower any material or object and includes its rails and other supports but does not include a device to which the provisions of this Part governing elevators or construction hoists apply;
 - (b) “prime mover” means an initial source of motive power;
 - (c) “transmission machinery” means any object by which the motion of a prime mover is transmitted to a machine that is capable of utilizing such motion, and includes a shaft, pulley, belt, chain, gear, clutch or other device. *New*.

- | | |
|-------------------|---|
| Clearances | 242.—(1) Clearances adequate for the safety of persons shall be maintained in a mine or plant between the moving part of any machine or any material carried by the moving part and any other machine or structure. |
| Lighting | (2) Adequate lighting shall be provided for all persons who are required to work near or about machinery in a mine or plant. |
| Fences,
guards | <p>(3) Every prime mover, machine, transmission machinery or device that is dangerous to the safety of any person in a mine or plant shall be safely fenced or guarded,</p> <p style="padding-left: 40px;">(a) unless its position, construction or attachment assures the same protection as if it were safely fenced or guarded; or</p> <p style="padding-left: 40px;">(b) unless it is provided with a safety device that automatically prevents a person operating it from coming into contact with any dangerous part.</p> |
| Idem | (4) Every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion connected to or forming part of or appurtenant to any machine, transmission machinery or device in a mine or plant shall be so recessed, encased, located or otherwise effectively guarded as to prevent injury to any person. |
| Repairs | (5) No person shall, or shall be permitted to clean, oil, adjust, repair or perform maintenance work on any machine, transmission machinery or device in a mine or plant while it or any part of it that is likely to endanger the safety of any person is in motion, except when such work is not practicable while the machine, transmission machinery or device is stopped. |
| Starting | <p>(6) No person shall work or be allowed to work where the starting of a machine, transmission machinery or device in a mine or plant is likely to endanger the safety of any person, due to electrical hazard or exposure to moving parts,</p> <p style="padding-left: 40px;">(a) unless prior to doing repair or maintenance on electrically driven machinery, the person has made arrangements to ensure that the disconnect switch or switches supplying power to the machinery are opened and tagged or locked in accordance with section 435; or</p> |

(b) unless, for other than electrically driven machinery, precautions have been taken to prevent such starting. *New.*

- 243.—(1) Every stationary power-driven grinding wheel in a mine or plant shall be provided with a suitable hooded guard. 1961-62, c. 81, s. 404 (1), *amended*. Grinding wheels to be guarded
- (2) Such guard shall be adjusted close to the wheel and extended forward, over the top of the wheel, to a point at least 30 degrees beyond a vertical line drawn through the centre of the wheel. 1961-62, c. 81, s. 404 (2). Idem
244. Every runway or staging in a mine or plant that is more than five feet from the floor and used for oiling or any similar purpose shall be provided with a hand-railing. 1961-62, c. 81, s. 406, *amended*. Runways to have hand-railing
245. Every counterweight in a mine or plant shall be situated or guarded so as to reduce to a minimum the hazard of injury to a person along its travel or should it become detached from its fastenings. Counter-weights
246. Persons engaged in dangerous proximity to moving machinery in a mine or plant shall not wear or be allowed to wear loose outer clothing. 1961-62, c. 81, s. 405, *amended*. Wearing loose clothing
- 247.—(1) The rated working load of every lifting device in a mine or plant shall be plainly marked on the device. Lifting devices
- (2) No lifting device in a mine or plant shall be loaded beyond its rated working load, except for the purpose of a test. Idem
- (3) No cable, chain, rope, sling, ring, hook, shackle, swivel or other part of a lifting device in a mine or plant shall be used unless it is of good construction, sound material and adequate strength to safely support the maximum load to which it is likely to be subjected, and is properly maintained. Idem
- (4) Every lifting device in a mine or plant shall be thoroughly examined at least annually by an authorized person. Idem
- (5) All rails in a mine or plant on which a lifting device moves shall be of proper size and properly laid and maintained and have an even running surface. Idem
- (6) No newly-installed lifting device in a mine or plant shall be used until it has been thoroughly tested and examined by an authorized person. *New.* Idem


WELDING AND BURNING — MINES AND PLANTS

- | | |
|--|--|
| Radiation protection | 248.—(1) All persons exposed to the hazard of radiation from welding or burning operations in a mine or plant shall use protective helmets, goggles, or other devices. |
| Ventilation or respiratory protection requirements | (2) When welding or burning operations in a mine or plant emit harmful fumes, adequate ventilation shall be provided, or respirators shall be worn by persons exposed to the fumes. |
| Protection against electric welding arc | (3) Persons shall do no welding or burning in a mine or plant where other persons may be exposed to radiation from the operation, unless such other persons wear suitable eye protection or are protected by screens. |
| Hand and arm protection | (4) Gauntlet gloves and arm protection shall be worn by persons when electric welding in a mine or plant. |
| Fire fighting equipment | (5) Suitable fire extinguishers shall be kept at hand during welding or burning operations in a mine or plant, or other fire fighting equipment shall be readily available. |
| Location of welding equipment | (6) Cylinders, piping and fittings of compressed and liquefied gas systems pertaining to welding and burning in a mine or plant shall be so located as to avoid physical damage to the cylinders, piping and fittings. |
| Flames | (7) Persons shall guard against sparks or flames from coming in contact with cylinders, regulators or hoses of compressed-gas systems pertaining to welding and burning in a mine or plant and all charged cylinders shall be protected from excessive heat. |
| Leaks | (8) Before using any gas-welding or burning equipment, persons shall ensure that all parts of the equipment are free from defects, leaks, oil or grease. |
| Cylinder valves | (9) Cylinder valves shall be closed when work is finished or cylinders are empty, and valve-protection covers shall be kept in position when the cylinder is not connected for use. |
| Containers | (10) No welding, brazing, soldering or burning operation shall be conducted on any container that has been used to contain any explosive or flammable substance, unless all practicable steps have been taken to, <p style="margin-left: 40px;">(a) remove the substance and any fume, gas, vapour or dust arising from it; or</p> |

- (b) render the substance and any fume, gas, vapour or dust arising from it non-explosive or non-flammable,

and if such container has been subjected to any such alteration or repair, it shall be ensured that no explosive or flammable substance enters the container until the container has cooled sufficiently to prevent any risk of igniting the substance. *New.*

TRAVELLING CRANES — MINES AND PLANTS

 249.—(1) In this section and in section 499, “crane” ^{Interpre-}
means a crane that travels on fixed tracks and is ^{tation}
operated from a cab mounted on the crane and which
may be radio controlled. 1961-62, c. 81, s. 401 (1),
amended.

(2) No person under the age of eighteen years and no ^{Qualifica-}
person who has not had adequate experience on a ^{tions of}
crane shall be authorized to operate a crane in a ^{crane}
mine or plant. 1961-62, c. 81, s. 401 (7), *amended.* ^{operators}

(3)—(a) No person shall operate or be permitted to ^{Idem}
operate a crane at a mine or plant unless he
has been examined by a legally qualified
medical practitioner acceptable to the employ-
er and the medical practitioner has issued to
him, on the form prescribed, a crane operator’s
medical certificate to the effect that to the
best of the practitioner’s knowledge the person
is not subject to any infirmity, mental or
physical (particularly with regard to sight,
hearing and heart) to such a degree as to
interfere with the efficient discharge of his
duties.

(b) Every crane operator’s medical certificate ^{Expiry of}
lapses and shall be deemed to have expired ^{certificate}
at the end of one year from its date.

(c) Every crane operator’s medical certificate ^{Filing of}
shall be kept on file by the employer and made ^{certificate}
available to an engineer at his request.

(4) No person, other than the operator, shall be per- ^{Riding}
mitted to ride on a crane or any part thereof in a ^{prohibited}
mine or plant or on any material carried by the
crane, except for inspection, supervision, mainten-
ance or repair, or the instruction of a new operator.
1961-62, c. 81, s. 401 (3-6), *amended.*

Warning
devices

- (5) Every crane in a mine or plant shall be equipped with a whistle, bell, gong or horn that shall be sounded at such times as are necessary to give warning of the approach of the crane to places where persons are working or are liable to pass. 1961-62, c. 81, s. 401 (2), *amended*.

Idem

- (6) Every crane in a mine or plant shall be equipped with an emergency exit.

Where
crane
endangers
person

- (7) Where any person is on or near the wheel track of a crane in any place in a mine or plant where the safety of such person is likely to be endangered by the crane, the operator of the crane shall be warned of the presence of such person and the crane or any part thereof shall not be allowed to approach within ten feet of the place.

Devices to
prevent
overwind

- (8) Every crane in a mine or plant shall be equipped with suitable devices to prevent overwinding.

Daily
examination
of cranes

- (9) The manager of a mine or plant shall depute one or more qualified persons to examine daily such parts of any crane or apparatus pertaining thereto upon the proper working of which the safety of persons depends.

Testing
before use

- (10) All shafts, hooks and other structural parts affecting the safe operation of every crane shall be non-destructively tested before being put into service, and thereafter at such intervals as to ensure that they are in safe condition.

Idem

- (11)—(a) Crane ropes shall be examined visually at least once in each day to detect the presence of kinks, broken wires or other visible damage.
- (b) Crane ropes shall be thoroughly examined at least once in each week to ensure that they are in safe operating condition.
- (c) If during such examinations there is discovered any weakness or defect whereby the safety of persons may be endangered, the crane shall not be used until the defect has been remedied or the rope removed from service.
- (d) Every crane rope, when newly installed, shall have a factor of safety of not less than 10 when

carrying its maximum load and using the breaking strength of the rope as certified by the rope manufacturer.

- (e) No crane rope shall be used when the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds four.

- (12) A record of all the examinations and tests and of ^{Record} other regular maintenance examinations and of all structural modifications of any crane in a mine or plant shall be kept signed by the person making the examinations, tests and modifications and such record shall be available to the district electrical-mechanical engineer at all times. *New.*

CONVEYOR BELTS—MINES AND PLANTS



- 250.—(1) No person shall ride on a conveyance or belt in ^{Conveyors, belts} a mine or plant unless approved by the chief engineer.

- (2) The following apply to installations of conveyor ^{Idem} belts in mines and plants:

- (a) Where conveyorways are used as regular travelways, such travelways shall be adequately illuminated and suitable means shall be provided to protect persons from material that may fall from the belt.
- (b) All conveyorways shall be provided with a walkway, crossover or some approved method of access for maintenance purposes.
- (c) Walkways shall not be less than 20 inches in width and shall be equipped with guardrails on the open sides where necessary.
- (d) Any accessible section of an electrically driven belt conveyor shall be provided with pull-cords to stop the conveyor in an emergency and such pull-cords shall reach from the head pulley to the tail pulley and all controls operated by these cords shall be of the manual-reset type.
- (e) Where required, an approved warning device shall be provided which will warn persons that the belt is about to start.

- (f) All head, tail, drive and tension pulleys shall be guarded at the pinch points and the length of such guards shall be extended to at least three feet from the pinch point. 1961-62, c. 81, s. 410, *amended*.

PROTECTION IN WORKING PLACES OF MINES

- | | |
|--------------------------------------|--|
| Overhead operations | 251. No person shall work in a location in a mine where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, <i>amended</i> . |
| Fencing of shafts and other openings | 252. The top of every working shaft in a mine shall be securely fenced or protected by a gate or guard-rail, and every pit or opening in a mine dangerous by reason of its depth shall be securely fenced or otherwise protected. 1961-62, c. 81, s. 260, <i>amended</i> . |
| Gate at shaft entrances | 253.—(1) At all shaft and winze openings on the surface and on every level in a mine, unless securely closed off, the hoisting compartments shall be protected by a substantial gate, which shall be kept closed except when the hoisting conveyance is being loaded or unloaded at such level. |
| Idem | (2) The clearance beneath any such gate shall be kept to a minimum. |
| Hoisting compartment gates |  (3) Where haulage tracks lead up to a hoisting compartment on surface or underground, the gate on such compartment shall be reinforced in such a manner that it is sufficiently strong to withstand any impact imparted thereto by collision therewith of any locomotive, train or car operated on such tracks.  |
| Idem | (4) Hoisting compartment gates shall be sufficiently reinforced where there is a hazard of impact due to the approach of a motor vehicle. 1961-62, c. 81, s. 261, <i>amended</i> . |
| Shaft and winze timbering | 254.—(1) Every shaft and winze in a mine shall be securely cased, lined or timbered, and during sinking operations the casing, lining or timbering shall be maintained within a safe distance of the bottom. 1961-62, c. 81, s. 262 (1), <i>amended</i> . |
| Idem | (2) In no instance shall such distance exceed fifty feet. 1961-62, c. 81, s. 262 (2). |

- (3) The guides, guide attachments and shaft casing, ^{Strength of guides, etc.} lining or timbering shall be of sufficient strength and shall be suitably designed, installed and maintained so that the safety catches referred to in section 324 may grip the guides properly at any point in the shaft. 1961-62, c. 81, s. 262 (3), *amended*.
255. There shall be provided a safe passageway and ^{Protection at shaft stations} standing room for a person outside the shaft at all workings opening into a shaft of a mine, and the manway shall in all cases be directly connected with such openings. 1961-62, c. 81, s. 263, *amended*.
- 256.—(1) Except during sinking operations, if material ^{Lining compartments at levels} is handled in a shaft or winze compartment of a mine, there shall be maintained around that compartment, except on the side on which material is to be loaded or unloaded, a substantial partition at the collar and at all levels. 1961-62, c. 81, s. 266 (1), *amended*.
- (2) Such partition shall extend above the collar and all ^{Idem} levels a distance not less than the height of the hoisting conveyance plus six feet and it shall extend below the collar and all levels at least six feet and it shall conform to the size of the conveyance allowing for necessary clearances. 1961-62, c. 81, s. 266 (2).
257. The footway or ladderway in a shaft or winze of a ^{Partition between manway and hoisting compartments} mine shall be separated from the compartment or division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290, *amended*.
258. Wherever a counterweight is used in a shaft or ^{Counter-weight compartment} winze of a mine, it shall be safely enclosed, unless it travels on guides. 1961-62, c. 81, s. 267, *amended*.
259. During shaft-sinking operations in a mine, no work ^{Protection in sinking operations} shall be done in any place in a shaft or winze while persons are working in another part of the shaft or winze below such place, unless the persons working in the lower position are protected from the danger of falling material by a securely-constructed covering extending over a sufficient portion of the shaft to afford complete protection. 1961-62, c. 81, s. 264, *amended*.
- 260.—(1) Open hooks shall not be used in conjunction ^{Open hooks not to be used} with the suspension of any shaft staging of a mine. 1961-62, c. 81, s. 264, *amended*.

Idem

- (2) Open hooks shall not be used in connection with the suspension of any equipment or material in a shaft, winze, raise, or over a person in any location underground in a mine. *New.*

Protection
on shaft
inspection

- 261.—(1) No person shall do or be permitted to do any work or conduct any examination in a compartment of a shaft or winze of a mine or in that part of the headframe used in conjunction therewith while hoisting operations, other than those necessary for doing such work or conducting such examination, are in progress in such compartment.

Idem

- (2) No person shall do or be permitted to do any work or conduct any examination in a shaft or winze of a mine or in that part of a headframe used in conjunction therewith unless he is adequately protected from accidental contact with any moving hoisting conveyance or counterweight or the danger of falling objects accidentally dislodged. 1961-62, c. 81, s. 268, *amended.*

Timbering
mine
workings

262. Where in a mine the enclosing rocks are not safe, every adit, tunnel, stope or other working in which work is being carried on or through which persons pass shall be securely cased, lined or timbered, or otherwise made secure. 1961-62, c. 81, s. 269, *amended.*

Steeply-
inclined
raises

- 263.—(1) Except where approved raising equipment is used, all raises in a mine that are to be inclined at over 50 degrees and that are to be driven more than sixty feet slope distance shall be divided into at least two compartments, one of which shall be maintained as a ladderway and shall be equipped with suitable ladders. 1961-62, c. 81, s. 271 (1), *amended.*

Idem

- (2) The timbering shall be maintained within a safe distance of the face and in no event shall the distance between the face and the top of the timbering exceed twenty-five feet. 1961-62, c. 81, s. 271 (2).

Precautions
as to broken
material

- 264.—(1) Whenever a chute in a mine is to be pulled and the safety of a person may be endangered by the settling of the broken material,

(a) the area affected by the pulling shall be guard-railed or marked by a sign or signs so that no person can inadvertently enter the area; or

- (b) any person who is working in the affected area shall be notified.
- (2)—(a) Proper precautions shall be taken during the pulling operation to ascertain whether or not the broken material is settling freely from the top. ^{Idem}
- (b) When there is any indication of a hang-up, the location shall be adequately protected by suitable signs or barricades.
- (3) There shall be provided two exits from each raised platform from which broken material is pulled. ^{Exits from platform}
265. Unless the entrance to a stope in a mine is capable of being used as such at all times, a second means of entrance shall be provided and maintained. 1961-62, c. 81, s. 273, *amended*. ^{Access to stopes}
266. The top of every mill hole, manway or other opening in a mine shall be kept covered or otherwise adequately protected. 1961-62, c. 81, s. 274, *amended*. ^{Guarding mill holes, manways, etc.}
267. Wherever persons are working in a mine below a level in a place whose top is open to the level in close proximity to a haulageway or travelway, some person shall be posted to effectively guard the opening unless it is securely covered over or otherwise closed off from the haulageway or travelway. 1961-62, c. 81, s. 275, *amended*. ^{Guarding open workings}
268. The tops of all raises or other openings to a level in a mine shall be kept securely covered, fenced off or protected by suitable barricades to prevent inadvertent access thereto. 1961-62, c. 81, s. 276, *amended*. ^{Guarding tops of raises}
269. There shall be provided and maintained in every mine an adequate supply of properly-dressed scaling bars and gads and other equipment necessary for scaling. 1961-62, c. 81, s. 278, *amended*. ^{Scaling bars and gads}
- 270.—(1) Where there is non-continuous shift operation in areas of a mine, the on-coming shift shall be warned of any abnormal condition affecting the safety of operations. ^{Warning of abnormal conditions}
- (2) Such warning shall consist of a written record over the signature of a responsible person on the off-going ^{Idem}

shift and shall be read and countersigned by the corresponding responsible person on the on-coming shift before persons are permitted to resume operations in the areas indicated in such record. 1961-62, c. 81, s. 282, *amended*.

Check-in,
check-out
systems

271. At every mine where persons are employed underground, a suitable system shall be established and maintained to check in all persons who have gone underground and to check out all persons who have returned to surface, and it is the duty of such persons to check in and to check out in accordance with such system. 1961-62, c. 81, s. 283, *amended*.

Signs designating
repair work



272. Where repair work is in progress in a manway in a mine or conditions arise that may endanger travel through the manway, it shall be closed as a travelway and adequate signs designating its unfitness for travel purposes shall be posted at all entrances to it. 1961-62, c. 81, s. 284, *amended*.



Diamond-drill holes

- 273.—(1) Diamond-drill holes shall be plotted on all working plans of levels of a mine.

Guarded
while
blasting
near

- (2) When an active mine heading is advancing toward a diamond-drill hole in a mine, the collar or the nearest points of intersection of the hole or both shall be securely closed off or guarded at all times that blasting is being done within fifteen feet of any possible intersection of the hole.

Marked

- (3) The collar and any points of intersection of every diamond-drill hole in a mine shall be plainly marked at the time that drilling is discontinued or an intersection made.

Idem, with
letter "H"

- (4) Such markings shall consist of a single capital letter "H" in yellow paint measuring twelve inches by twelve inches, which shall be placed within four feet of the collar or intersection. 1961-62, c. 81, s. 285, *amended*.

Tailing
used for fill

274. Where tailings are used for filling worked-out areas underground in a mine, the moisture contained in the tailings and the liquid draining off therefrom shall not have a higher cyanide content than .005 per cent expressed as cyanide of potassium. 1961-62, c. 81, s. 286, *amended*.

HANDLING WATER — MINES

275. Every working mine shall be provided with suitable and efficient machinery and appliances for keeping the mine free from water, the accumulation or flowing of which might endanger the lives of persons in the mine or in any adjoining mine. 1961-62, c. 81, s. 199, *amended*. Removal of water from mine workings
276. Where there is or may be an accumulation of water on surface or in a mine, any working approaching the same shall have bore holes kept in advance and such additional precautionary measures shall be taken as are deemed necessary to obviate the danger of a sudden breaking-through of the water. 1961-62, c. 81, s. 200, *amended*. Precautions against flow of water
277. A suitable stopping shall be placed in every working shaft in a mine to prevent that part of the hoisting conveyance carrying persons from being inadvertently lowered into water in the sump of the shaft. 1961-62, c. 81, s. 201, *amended*. Protection at sump
- 278.—(1) In this section, Interpretation
- (a) "bulkhead" means any structure built for the purpose of impounding water or confining air under pressure in a drift, crosscut or any other mine opening and constructed in such a manner as to completely close off such drift, crosscut or other mine opening;
 - (b) "dam" means a structure built for the purpose of impounding water in a drift, crosscut or other mine opening and built in such a manner as to permit an unobstructed overflow of the water.
- (2) The location of every underground bulkhead and dam within the meaning of this section shall be clearly shown on the mine plans. 1961-62, c. 81, s. 202 (1, 2). Location of bulkheads and dams
- (3) No dam behind which more than twenty-five tons of water may be impounded shall be constructed underground in a mine until application in writing is made to the district mining engineer and written permission is granted by the chief engineer and then only when constructed in accordance with plans and specifications that have been approved by the chief engineer. Permission for dams
- (4) No bulkhead shall be constructed underground in a mine without the written permission of the chief Permission necessary for bulkhead

engineer and then only when constructed in accordance with plans and specifications that have been approved by him.

Completion
of bulkhead

- (5) On the completion of the installation of a bulkhead in a mine, the manager shall immediately notify the chief engineer that it has been completed. 1961-62, c. 81, s. 202 (3-5), *amended*.

CARE AND USE OF EXPLOSIVES AND BLASTING AGENTS

Precautions
to be taken

279. Every possible precaution shall be taken in the handling and transportation of explosives and blasting agents at a mine or plant. 1961-62, c. 81, s. 211, *amended*.

Marking of
explosives

- 280.—(1) No explosive shall be used at a mine or plant unless there is plainly printed or marked on every original package containing the explosive, the name and place of business of the manufacturer, the strength of the explosive and the date of its manufacture. 1961-62, c. 81, s. 212.

Fume clas-
sification of
explosives

- (2) Only explosives in Fume Class I as established by the Explosives Division of the Department of Energy, Mines and Resources of Canada or explosives and blasting agents as permitted by the chief engineer shall be used underground in a mine.

Preparation
of blasting
agents

- (3) The preparation of a blasting agent at a mine or plant, except when prepared by a properly-authorized manufacturer of explosives or blasting agents, shall be done only with the permission in writing of the chief engineer. 1961-62, c. 81, s. 213, *amended*.

Defective
explosives,
etc., to be
reported

- (4) Every case of supposedly defective fuse, detonator or blasting cap or explosive shall be reported to the district mining engineer with the name and address of the manufacturer and accompanied, if available, by the packing slip from the original container of the fuses, detonators or blasting caps, or explosives, along with all other pertinent information available. 1961-62, c. 81, s. 214, *amended*.

Storage of
explosives
and blasting
agents

- 281.—(1) Except as otherwise provided, all explosives, blasting agents, detonators and blasting caps shall be stored on surface at a mine or plant in special suitable buildings, such as magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses.

Storage of
detonators
etc.

- (2) Detonators, blasting caps or igniter cord shall not be stored in the same receptacle or storage building as other explosives or blasting agents.

- (3) No such storage building shall be erected or maintained at a mine or plant without the written permission of the district mining engineer, nor until the site of the building and the style of structure have been approved by him. Permission necessary before construction
- (4) Such written permission shall state the maximum quantity and kind of detonators, explosives or blasting agents that may be stored in the building. Permission to state quantity
- (5) The permission shall be posted up in the building. Permission to be posted
- (6) Every such storage building shall be under the direction of the manager or a person authorized by him. 1961-62, c. 81, s. 215 (1-6), *amended*. Storage under authorized person
- (7) Explosives or blasting agents shall not be stored within 300 feet of a mine or plant main substation. 1961-62, c. 81, s. 221, *amended*. Storage near power prohibited
- (8) The minimum distance measured at ground level between an overhead supply line and explosives or blasting agents storages shall not be less than $1\frac{1}{2}$ times the length of one span between the supports of such line. *New*. Storage near overhead supply lines
- (9) Where possible, every such storage building shall be located in accordance with the British Table of Distances in respect of its distance from the mine or plant or any other building or any public road or railway. Location of storage buildings
- (10) Where conditions are such that it is impossible to locate any storage building in accordance with the British Table of Distances, the mine or plant manager and the district mining engineer shall jointly choose the most suitable location. Idem
- (11) Storages for blasting agents may contain three times the quantity of blasting agents as compared to explosives set by the British Table of Distances. Storages for blasting agents
- (12) Where explosives and blasting agents are stored together, the lesser limit of storage applies. Where explosives and blasting agents stored together
- (13) Every such storage building shall be constructed of such materials as to ensure as far as possible against accident from any cause. Materials used in storage buildings
- (14) The requirements in reference to the care and use of explosives and blasting agents shall be kept posted up inside every such storage building. Requirements to be posted
- (15) Every such storage building shall be kept securely locked at all times that the attendant is not present Buildings locked, and signs

and it shall be clearly indicated by one or more easily visible signs that explosives or blasting agents are stored therein.

Posting
of signs

- (16) Such sign or signs shall be posted beside the road approaches to the building at least eight feet above the ground and twenty-five feet distant from the entrance. 1961-62, c. 81, s. 215 (13), *amended*.

Storages
to be
clean, etc.

- 282.—(1) All explosive, blasting agent, detonator or fuse storages at or in a mine or plant shall be kept clean, dry and free from grit at all times. 1961-62, c. 81, s. 216 (1), *amended*.

Floors
and shelves

- (2) Floors and shelves of magazines and thaw houses shall be treated with a suitable neutralizing agent, whenever necessary, to remove any traces of explosive substances. 1961-62, c. 81, s. 217.

What
explosives
and blasting
agents
to be used
first

- 283.—(1) When supplies of explosives or blasting agents are removed from a magazine, those that have been longest in the magazine, if they are not defective, shall be used first.

Defective
explosives
and blasting
agents

- (2) Where explosives or blasting agents become defective, they shall be suitably and safely disposed of.

Disposal of
defective
explosives
and blasting
agents

- (3) An engineer may, if he deems it necessary to protect life or property, arrange for the disposal of defective or abandoned explosives or blasting agents, and the amount of costs so incurred shall be a debt due to the Crown from the owner or agent, recoverable in any court of competent jurisdiction. 1961-62, c. 81, s. 218, *amended*.

Opening
cases

284. Only implements of wood or fibre shall be used in opening cases that contain explosives. 1961-62, c. 81, s. 219.

Storage of
explosives
and blasting
agents
under-
ground

- 285.—(1) Explosives or blasting agents, including caps, fuses and igniter cord, shall not be stored underground in a mine in excess of the necessary underground supply for forty-eight hours. 1961-62, c. 81, s. 220 (1).

Storage
capacity

- (2) In no case shall an amount exceeding 300 pounds of explosives or 900 pounds of blasting agents be stored in any one place underground in a mine without the written permission of the district mining engineer. 1961-62, c. 81, s. 220.

Written
permission
for
increased
capacity

- (3) With the written permission of the district mining engineer and subject to such conditions as he prescribes, other underground explosive storages in a mine may be established, but in no case shall more

than 1,000 pounds of explosives or 3,000 pounds of blasting agents be stored in any one storage place.

- (4) Where explosives and blasting agents are stored together underground in a mine, the lesser limit of storage applies. Idem
 - (5) Explosives and blasting agents stored underground in a mine shall be kept in suitable containers or storage places in suitable locations. Suitable storage
 - (6) Explosives or blasting agents shall not be stored underground in a mine in places where there is a possibility of a train or car colliding with the containers of the explosives or blasting agents. Protection from trains, etc.
 - (7) Where explosives or blasting agents in excess of the quantity that may be stored in approved underground storages in a mine are required for such operations as longhole blasts, etc., only such quantities as can be loaded in a twenty-four hour period shall be kept in a storage place underground at any time for such blast. Where excess quantities required
 - (8) Any explosives or blasting agents not loaded at the end of a shift shall be stored in accordance with the requirements of this section or be adequately guarded. 1961-62, c. 81, s. 220, *amended*. Surplus at shift end
- 286.—(1) Explosives or blasting agents shall not be stored underground in a mine within, Location of underground storages for explosives, etc.
- (a) 200 feet of a shaft station; or
 - (b) the distance prescribed by subsection 4 of section 560.
- (2) Detonators, blasting caps, capped fuses or igniter cord, while stored underground in a mine, shall be kept in separate, suitable, closed containers or storage places. Idem, detonators, etc.
 - (3) Such containers and storage places shall not be located within twenty-five feet of any other explosives or blasting agents. 1961-62, c. 81, s. 222, *amended*. Idem
- 287.—(1) No flame-type light shall be taken within twenty-five feet of any building or place on the surface of a mine or plant in which explosives or blasting agents are stored. Open-flame lamps on surface
- (2) No flame-type light shall be taken within ten feet of any place underground in a mine where explosives or blasting agents are stored unless a suitable, safe arrangement for the placing of such light is provided. Idem, underground

Smoking

- (3) No person shall smoke in any place or building in a mine or plant where explosives or blasting agents are stored or while handling explosives or blasting agents. 1961-62, c. 81, s. 223, *amended*.

Inspection
of storage
places

- 288.—(1) A properly authorized person or persons shall make a thorough weekly inspection of all explosives or blasting agents, explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, cap and fuse houses, and all storage boxes or places in or about the mine or plant used for the purpose of storing explosives, blasting agents, detonators or blasting caps and shall make a report in writing to the manager stating that such inspection has been made and certifying as to the conditions found.

Unsuitable
conditions
to be
rectified

- (2) The manager shall take immediate steps to correct any unsuitable conditions found and to properly dispose of any deteriorated explosives or blasting agents.

Careless
acts

- (3) The manager shall make a prompt investigation when an act of careless placing or handling of explosives or blasting agents is discovered by or reported to him.

Report of
carelessness
to engineer

- (4) Any employee who commits a careless act with an explosive or blasting agent or where explosives or blasting agents are stored, or who, having discovered such an act to have been committed, omits or neglects to report immediately such act to an officer in charge of the mine or plant, is guilty of an offence against this Act, and the officer in charge of the mine or plant shall immediately report such offence to the district mining engineer or to the Crown attorney of the county or district in which the mine or plant is situate. 1961-62, c. 81, s. 224, *amended*.

Disposal of
explosives,
etc.

- 289.—(1) When a mine or plant is closed down, all explosives, blasting agents, fuses, detonators and blasting caps shall be disposed of and no explosive or blasting agent shall be stored at any such closed-down mine or plant without the written permission of the chief engineer. 1961-62, c. 81, s. 225, *amended*.

Removal
from mine,
etc., of
explosives,
etc.

- (2) No person shall take away from a mine or plant any explosive, blasting agent, fuse, detonator or blasting cap without the written permission of the manager or of such person as is authorized by the manager to give such permission. 1961-62, c. 81, s. 226, *amended*.

- 290.—(1) No building for thawing explosives shall be maintained in connection with a mine or plant without the written permission of the district mining engineer. ^{Thaw houses}
- (2) The building shall be above ground, and the site of the building and the style of the structure and equipment shall be subject to the approval of an engineer. ^{Approval of building}
- (3) The quantity of explosives kept in a thaw house at any time shall not exceed the requirements of the mine or plant for a period of twenty-four hours plus the amount that may be necessary to maintain that supply, but the district mining engineer may give permission in writing to store a quantity not in excess of the permitted capacity of the building if, in his opinion, the heating equipment is such that the temperature can be controlled within approved safe limits. ^{Quantity stored}
- (4) A reliable recording thermometer shall be kept in the room in which explosives are thawed and the record thereof kept, but, where the amount of explosives in such thawing room does not exceed 200 pounds at any one time, the district mining engineer may give permission in writing to use a maximum and minimum registering thermometer on condition that a daily record of high and low temperatures be made and kept on file for at least one year. ^{Thermometer in thaw house}
- (5) All such records shall be made available to the district mining engineer. 1961-62, c. 81, s. 227. ^{Idem}
291. No explosives shall be thawed near an open fire or steam boiler or by direct contact with steam or hot water in a mine or plant. 1961-62, c. 81, s. 228, *amended*. ^{Prohibition}
- 292.—(1) This section applies only on mine or plant premises and only on surface. *New*. ^{Application of section}
- (2) Every motor vehicle used for transporting explosives or blasting agents shall be maintained in sound mechanical condition. 1961-62, c. 81, s. 229 (1, 2), *amended*. ^{Transportation of explosives, etc., on surface by motor vehicles}
- (3) Every such motor vehicle shall be conspicuously marked by suitable signs or red flags easily visible from front and rear. 1961-62, c. 81, s. 229 (3). ^{Markings}
- (4) The metal parts of every vehicle that may come in contact with containers of explosives or blasting ^{Metal parts to be covered}

agents shall be suitably covered with wood, tarpaulin or other suitable material.

No other
goods

- (5) No other goods or materials shall be transported on any vehicle on which explosives or blasting agents are being transported.

Fire ex-
tinguisher

- (6) Every motor vehicle transporting more than 150 pounds of explosives or blasting agents shall be equipped with a fire extinguisher in working order, of adequate size and capable of dealing with a gasoline or oil fire. 1961-62, c. 81, s. 229 (4-6), *amended*.

Load
limits

- (7) No motor vehicle shall be loaded with more than 80 per cent of its carrying capacity when transporting explosives or more than 100 per cent of its carrying capacity when transporting blasting agents. 1961-62, c. 81, s. 229 (7).

Load
to be
secured

- (8) Explosives or blasting agents transported on a vehicle shall be secured or fastened so as to prevent any part of the load from becoming dislodged.

Detonators

- (9) Detonators shall not be transported in the same vehicle as other explosives or blasting agents except in a suitable container in a separated compartment, and in such case the number shall not exceed 5,000 detonators.

Not to be
unattended

- (10) A vehicle transporting explosives or blasting agents shall not be left unattended.

No surplus
crew

- (11) Only those persons necessary for the handling of explosives or blasting agents shall travel on a vehicle that is transporting explosives or blasting agents.

No smoking

- (12) There shall be no smoking by persons on a vehicle that is transporting explosives or blasting agents. 1961-62, c. 81, s. 229 (8-12), *amended*.

Transporta-
tion of
explosives,
etc., in shaft
conveyances

- 293.—(1) When the day's supply of explosives or blasting agents is being transported in a shaft conveyance in a mine, the person in charge of the operation shall give or cause to be given notice of the operation to the deckman and hoistman.

Authoriza-
tion to
handle

- (2) No person shall,
 (a) place in;
 (b) have while in; or

(c) take out of,

a shaft conveyance of a mine any explosives or blasting agents except under the immediate supervision of a person authorized for the purpose by the responsible supervisor.

- (3) No other material shall be transported with explosives or blasting agents in a shaft conveyance in a mine. 1961-62, c. 81, s. 230, *amended*. No other material in conveyance

294.—(1) The transfer of explosives or blasting agents from the magazine or other surface storage place at a mine or plant shall be so arranged that no undue delay will occur between the time the explosives or blasting agents leave the surface storage place and the time they are properly stored in designated storage places in the mine or plant or distributed to points of use in the mine or plant. Transfer of explosives or blasting agents from storage places

- (2) Explosives or blasting agents shall not be left at a level station or near the shaft collar or other entrance to a mine but shall be transferred from a designated storage place to other designated storage places or points of use without undue delay. 1961-62, c. 81, s. 231, *amended*. Transfer without undue delay

295.—(1) Primers shall be made up as near to their point of use as is practicable in the interests of safety and then only in sufficient numbers for the immediate work in hand. Transportation of detonators

- (2) Detonators, blasting caps, capped fuses, made-up primers, igniter cord or other explosives or blasting agents shall not be transported in a conveyance either on surface or underground at a mine or plant unless placed in separate, suitable, closed containers. Suitable containers

- (3) A person may carry capped fuses with other explosives or blasting agents from the nearest storage place at a mine or plant to the point of use without placing them in a container if they are kept separate from other explosives and blasting agents. Kept separate from other explosives or blasting agents

- (4) Made-up primers shall not be transported or carried at a mine or plant unless placed in separate, suitable, closed containers. 1961-62, c. 81, s. 232, *amended*. Made-up primers

296.—(1) Where explosives or blasting agents are transported in mine workings by means of mechanical haulage, including trackless equipment, the speed Transportation of explosives, etc., underground, speed and right of way

of the vehicle shall not exceed 4 miles an hour and definite arrangements for the right of way of the vehicle shall be made before the vehicle is moved.

By mechanical track haulage

(2) Where mechanical track haulage is used in a mine,

- (a) the locomotive shall be maintained on the forward end of the train transporting explosives or blasting agents unless some person walks in advance of the train to effectively guard it;
- (b) any car carrying explosives or blasting agents shall be separated from the locomotive by an empty car or spacer of equivalent length; and
- (c) in no case shall explosives or blasting agents be carried on the locomotive.

By trolley locomotive haulage

(3) Where a trolley locomotive is used in a mine, the car or cars transporting explosives or blasting agents shall be protected from trolley-wire contact and other existing hazards.

By trackless equipment

(4) Where trackless equipment is used for the transportation of explosives underground in a mine, the requirements of section 292, except subsection 3, apply.

Idem

(5) Where trackless equipment is used for the transportation of blasting agents in a mine, the requirements of section 292, except subsections 3 and 4, apply. 1961-62, c. 81, s. 233, *amended*.

Blasting on contiguous claims

297. Where parties working contiguous or adjacent claims or mines disagree as to the time of setting off blasts, either party may appeal to the district mining engineer, who shall decide upon the time at which blasting operations thereon may be performed, and his decision is final and conclusive and shall be observed by them in future blasting operations. 1961-62, c. 81, s. 234, *amended*.

Explosives not to be removed from original container

298. No explosive shall be removed from its original paper container or cartridge in a mine or plant. 1961-62, c. 81, s. 235.

Blasting of roast heaps

299. No explosive shall be used to blast or break up ore, salamander or other material in a mine or plant where by reason of its heated condition there is any danger or risk of premature explosion of the charge. 1961-62, c. 81, s. 236.

300. All drill holes in a mine or plant shall be of sufficient Size of drill holes size to admit of the free insertion to the bottom of the hole of a cartridge of explosive. 1961-62, c. 81, s. 237.
301. In charging holes for blasting in a mine or plant, no No iron or steel tools iron or steel tool or rod shall be used, and no iron or steel tool shall be used in any hole containing explosives. 1961-62, c. 81, s. 238.
- 302.—(1) Before drilling is commenced in a working Procedure before drilling place in a mine the exposed face shall be washed with water and carefully examined for misfires and cut-off holes, giving special attention to old bottoms.
- (2) No drilling shall be done in a mine within six inches Bootleg holes of any hole that has been charged and blasted or any remnant of such hole.
- (3) No drilling shall be done in a mine within five feet Holes containing explosives, etc. of any hole containing explosives or blasting agents. 1961-62, c. 81, s. 239 (1-3).
- (4) Drilling or undercutting and charging operations at Precautions when loading a mine shall not be carried on simultaneously on the same face above or below each other or within twenty-five feet horizontal distance. 1961-62, c. 81, s. 239 (4), *amended*.
- 303.—(1) Every blaster shall, before blasting, cause all Guarding entrances where blasting is done entrances or approaches to the place where the blasting is to be done or where the safety of persons may be endangered by the blasting to be effectively guarded so as to prevent inadvertent access to such place while the charges are being blasted, including diamond drill holes as required by subsection 2 of section 273.
- (2) Subject to permission having been obtained, when Guarding roads required, from the appropriate authority, where it is necessary to stop traffic on a public road during a blasting operation,
- (a) an adequate number of flagmen equipped with suitable red flags shall be posted; and
- (b) signs, such as "DANGER", "BLASTING" or "STOP FOR FLAGMAN", shall be posted,
- along the road at suitable locations to warn traffic approaching the flagman guarding the area. 1961-62, c. 81, s. 241 (1, 2), *amended*.

Signs not
adequate

- (3) Posting of signs shall not be deemed to be adequate protection for blasting operations. 1961-62, c. 81, s. 241 (3).



Due
warning
required

- (4) Every blaster shall, before blasting, give or cause to be given due warning in every direction by shouting "Fire" and shall satisfy himself that all persons have left the working place or the vicinity except those required to assist him in blasting and guarding. 1961-62, c. 81, s. 240 (1), *amended*.

Large
blasting
operations
under-
ground

- (5) Where the extent of the operation or the safeguarding of persons underground in a mine renders the warning under subsection 4 ineffective, such additional precautions to those so required shall be taken to ensure that all areas of the mine, which may be affected by the blasting operation, are vacated. *New*.

In pits and
quarries

-  (6) In open pits or quarries where,
- (a) the extent of the operation or the exposure of persons renders the warning required under subsection 4 ineffective, due warning shall be given of a primary blast by siren or its equivalent in an approved manner in addition to guarding as required by subsection 1;
 - (b) personnel are required near the blast area, the manager shall provide blasting shelters or some other form of protection for employees satisfactory to the engineer. 

Breaking
through
to mine
workings

304. Where possible, no connection between mine workings shall be made until a thorough examination of the working towards which the active heading is advancing has been made and has shown that the work can be proceeded with in a safe manner, and such point of connection shall be guarded as an entry when blasting within twice the length of the longest drill steel used or a minimum of fifteen feet of breaking through. 1961-62, c. 81, s. 242.

Minimum
length
of fuse

- 305.—(1) Except where fired electrically, no fuse shorter than three feet shall be used in any blasting operation in a mine or plant nor shall any fuse be lighted at a point closer than three feet from the capped end. 1961-62, c. 81, s. 243.

Detonator
required

- (2) No drill hole in a mine shall be charged with explosives or blasting agents unless a properly prepared detonating agent is placed in the charge and it shall be fired in its proper sequence in one blasting operation. 1961-62, c. 81, s. 245.

- (3) All drill holes in a mine that are charged with ^{Firing} explosives or blasting agents in one loading operation shall be fired in one blasting operation.
- (4) Any drill hole in a mine that has been charged with ^{Idem} explosives or blasting agents or any explosive charge that has been set shall not be left unfired but shall be fired at the time for blasting required by the approved practice of the mine. 1961-62, c. 81, s. 246.
- (5) Where a safety fuse is used in a blasting operation ^{Safety fuses} in a mine,
- (a) suitably capped fuses shall be supplied to the blasters in standard, uniform and safe lengths for the operation at hand; and
 - (b) the uncapped ends of all fuses for use in a mine shall be suitably identified. 1961-62, c. 81, s. 247, *amended*.
- (6) Where more than one charge is to be fired, each fuse ^{Lighting fuses} connected to a charge of explosives or blasting agents shall be lighted with a suitably-timed spitting device.
- (7) Where more than one charge is to be fired, no blaster ^{Number of men} shall be permitted to conduct any blasting operation unless he is accompanied by one or more other persons.
- (8) Every person engaged in a blasting operation shall ^{Idem, lights} carry a light unless the blasting operation is conducted on surface in daylight or under artificial light. 1961-62, c. 81, s. 248, *amended*.
- 306.—(1) Where blasting is done in a raise or stope, proper precautions shall be taken to prevent the closing of the means of entrance to the working place or interference with the effective circulation of air following the blast by the broken material produced by the blast. ^{Protection of entrance to working place}
- (2) In the case of a single-compartment raise or box-hole ^{Idem} where material from the blast may block the means of entrance, proper precautions shall be taken to ensure the adequate ventilation of the working place before a person enters it. 1961-62, c. 81, s. 250, *amended*.
- 307.—(1) Where safety fuses were used in connection ^{Interval before return to scene of blast} with a blast and two or more shots were fired, no blaster or other person shall leave or be permitted to leave his place of refuge from the blast and return

to the scene of the blast within the number of minutes that are equal to twice the number of feet in the longest fuse used in the blasting operation.

Idem

- (2) Such period of time shall be calculated from the time when the last shot was heard except where the requirements of subsection 5 apply.

Firing done electrically

- (3) Where the firing was done by means of electric delay-action detonators and any shot has been heard, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of any blast within ten minutes of the time at which the blasting circuit is closed.

Idem

- (4) Except when no shot was heard and a faulty circuit is indicated, the circuit may be repaired immediately after the blaster has assured himself that the blasting switch is locked in the open position and the lead wires are short-circuited.

Misfire or missed hole

- (5) Where a safety fuse was used and a supposed misfire or missed hole, including a reblasted misfire, occurs in a blasting operation, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of the blast within thirty minutes of the time of lighting of the fuse or fuses. 1961-62, c. 81, s. 244, *amended*.

Missed holes, etc.

- (6) When a blaster fires any charges, he shall, where possible, count the number of shots.

Idem

- (7) If a misfire is suspected, he shall report it to his supervisor.

Idem



- (8) If a missed hole has not been fired at the end of a shift, that fact, together with the location of the hole, shall be reported by the supervisor to the supervisor in charge of the next relay of persons going into that working place before work is commenced by them.

Idem

- (9) Any charge of explosives that has missed fire shall not be withdrawn but shall be blasted at a proper time and without undue delay, except that where a suitable device is used by an authorized person, the charge of explosives may be washed from the hole. 1961-62, c. 81, s. 251 (1-4), *amended*.

Idem

- (10) Any blasting agent that has missed fire may be washed out of the hole.

- (11) No development heading shall be abandoned or ^{Idem} work therein discontinued until the material broken at the firing of the last round has been cleared from the face and the whole face of the heading examined for explosives or blasting agents in missed or cut-off holes. 1961-62, c. 81, s. 251 (5, 6).
- 308.—(1) After the first ten feet of advance has been made in a shaft or winze and until such time as the permanent timbers and ladders have reached the level upon which blasting is being done, all blasting in the shaft, winze, station or other workings being driven therefrom shall be done by means of an electric current. ^{Where electric blasting required}
-  (2) In any raise, where free escape is not ensured at all times, all blasting shall be done by means of an electric current or by an approved means initiated from a safe location outside the raise. 1961-62, c. 81, s. 252, *amended*. ^{In raises over 50 degrees} 
309. Where blasting is done by means of an electric current, a person shall not enter or allow other persons to enter the place where the charges have been fired until he has disconnected and short-circuited the firing cables or wires from the blasting machine or portable direct-current battery or has assured himself that the switch of the approved blasting switch is open, the firing cables or wires short-circuited and the blasting box locked. 1961-62, c. 81, s. 253, *amended*. ^{Electric current to be disconnected after blasting}
- 310.—(1) Where the source of current is a portable direct-current battery or a blasting machine, the firing cables or wires shall not be connected to the source of current until immediately before they are required for firing the charges and shall be disconnected immediately after the connection has been made and the machine operated for firing the charges. 1961-62, c. 81, s. 255. ^{Blasting by direct current or blasting machine}
- (2) The firing cables leading to the face shall be short-circuited while the leads from the blasting caps are being connected to each other and to the firing cables. ^{Firing cables, how to be used}
- (3) The short-circuit shall not be removed until the blaster and other persons have retreated from the face and it shall be so located that a premature explosion would be harmless to the persons opening the short-circuit. ^{Idem}

- Idem (4) The short-circuit shall be replaced immediately after the cables have been disconnected from the blasting machine or the circuit from the blasting switch has been opened. 1961-62, c. 81, s. 256, *amended*.
- Idem (5) The firing cables or wires used for firing charges at one working place shall not be used for firing charges in another working place until all proper precautions have been taken to ensure that such firing cables or wires have no connection with the leads from the first working place.
- Idem (6) When firing cables or wires are used in the vicinity of power and lighting cables, the blaster shall take proper precautions to prevent the firing cables or wires from coming in contact with the lighting or power cables. 1961-62, c. 81, s. 257.
- Where electricity from supply line used (7) Where electricity, other than from a portable, hand-operated device, is used for firing charges, a fixed device of a design certified by the district electrical-mechanical engineer as meeting the requirements of section 515 shall be used.
- Idem (8) One such device shall be maintained for each individual working place in which firing is done by means of electricity using circuits complying with the requirements of section 517. 1961-62, c. 81, s. 254, *amended*.

EXAMINATION OF MINE WORKINGS AND SHAFT INSPECTION

- Examination of mine workings 311.—(1) The manager of a mine or some authorized person or persons shall examine on each working shift all parts where drilling and blasting are being carried on, shall examine at least once a week the other parts in which operations are being carried on, such as shafts, winzes, levels, stopes, drifts, cross-cuts and raises, in order to ascertain that they are in a safe condition.
- Idem, scaling (2) The manager of a mine or some authorized person or persons shall inspect and scale or cause to be inspected and scaled by a qualified person the roofs, walls and faces of all stopes or other working places as often as the nature of the ground and of the work performed necessitates. 1961-62, c. 81, s. 287, *amended*.
- Shaft inspection 312.—(1) The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to make an inspection of the shaft at least

once each week, and in addition a thorough examination shall be made at least once each month of the guides, timber, walls and hoisting compartments generally of the shaft, and a record of such inspection and examination shall be made in the Shaft Inspection Record Book by the person making the examination.

- (2) Every such manager shall keep or cause to be kept at the mine a book for each shaft termed the Shaft Inspection Record Book in which shall be recorded a report of every such examination, as is referred to in this section, signed by the persons making the examination. 1961-62, c. 81, s. 288 (1, 2), *amended*.
Shaft
Inspection
Record
Book
- (3) Such entries of examinations shall be read and initialled every week by the person in charge of the maintenance of the shaft.
Entries
to be
initialled
- (4) A notation shall be made of any dangerous condition reported and the action taken regarding it over the signature of the person in charge of the maintenance of the shaft.
Dangerous
conditions
noted
- (5) The Shaft Inspection Record Book shall be made available to an engineer at all times. 1961-62, c. 81, s. 288 (3-5).
Available
to engineer

LADDERWAYS AND LADDERS

- 313.—(1) A suitable footway or ladderway shall be provided in every shaft and winze.
Ladderways
in shafts
and winzes
- (2) In shafts and winzes, no ladder, except an auxiliary ladder used in sinking operations, shall be installed in a vertical position. 1961-62, c. 81, s. 289 (1, 2).
Not in
vertical
position
 - (3) During sinking operations, if a ladder is not maintained to the bottom, an auxiliary ladder that will reach from the permanent ladders to the bottom shall be provided in such convenient position that it may be promptly lowered to any point at which a person is working. 1961-62, c. 81, s. 289 (3), *amended*.
Sinking
operations
 - (4) Wherever, about shafts and winzes and headframes used in conjunction therewith, it is necessary for persons to examine or inspect appliances installed therein, suitable ladderways or stairways and platforms shall be maintained to permit such work to be carried out in a safe manner. 1961-62, c. 81, s. 289 (4).
Headframes

Partition
between
manway
and hoisting
compart-
ments

314. The footway or ladderway in a shaft or winze shall be separated from the compartment or division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290.

Ladderway
in shaft,
over
70 degrees

- 315.—(1) In a shaft or winze inclined at over 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body, and the ladders shall be so placed as to cover this opening in the platform.

Idem,
under
70 degrees

- (2) In a shaft or winze inclined at less than 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, the ladders may be continuous, but substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body. 1961-62, c. 81, s. 291, *amended*.

When
stairway
permissible

- 316.—(1) Stairways may be used in a shaft or winze inclined at less than 50 degrees from the horizontal.

Hand-rail

- (2) All stairways in shafts and winzes shall be equipped with a suitably placed hand-rail. 1961-62, c. 81, s. 292.

Ladder-
ways,
other mine
workings

- 317.—(1) All ladderways in raises, stopes and other manways shall be installed and maintained in a safe condition to reduce to a minimum the hazard of a person falling therefrom.

Landing
platforms

- (2) In manways inclined at 70 degrees or more, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders shall be off-set at the platforms.

Idem

- (3) In manways inclined at less than 70 degrees and more than 50 degrees, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders may be continuous.

Idem

- (4) In manways inclined at 50 degrees or less, the ladders may be continuous and no platforms are required except at points of off-set. 1961-62, c. 81, s. 293, *amended*.

318. Wire rope or strands of wire rope shall not be used ^{Wire rope ladders} or be allowed to be used for climbing purposes if they are frayed or have projecting broken wires. 1961-62, c. 81, s. 294.
- 319.—(1) Every ladder shall project at least three feet ^{Hand-rails for ladders} above its platform, except where strong hand-rails are provided. 1961-62, c. 81, s. 295.
- (2) Every ladder shall be of strong construction, shall ^{Ladders} be securely placed and shall be maintained in a safe condition.
- (3) The distance between the centres of rungs of ladders ^{Distance between rungs} shall be not more than twelve inches and not less than ten inches, and the spacing of rungs shall not vary more than one-half inch in any ladderway.
- (4) In order to give a proper foothold, the rungs of ladders shall in no case be closer than four inches ^{Distance from wall} from the wall of a shaft, winze or raise or any timber underneath the ladder. 1961-62, c. 81, s. 296, *amended*.
320. No person shall be or be permitted to be in a ladder-way while, ^{Material handling in ladderways}
- (a) a bucket is being loaded or unloaded at the top; or
 - (b) a bucket or material is being hoisted or lowered. *New.*

HOISTS AND HOISTING

SINKING EQUIPMENT

- 321.—(1) After a depth of 300 feet below the sheave has been attained in the sinking of a vertical shaft or winze at a mine, a suitable bucket and crosshead, as referred to in subsection 2 and in section 322, shall be used. 1961-62, c. 81, s. 336 (1), *amended*. ^{When crosshead required}
- (2) When a closed type of crosshead is not used, the bucket shall be barrel-shaped and shall be suspended ^{Suspension, barrel-shaped bucket} by the upper rim. 1961-62, c. 81, s. 336 (2).
- 322.—(1) All sinking crossheads at a mine shall be provided with a safety appliance of a design approved by the district electrical-mechanical engineer for attaching the bucket to the crosshead, so constructed that the crosshead cannot stick in the hoisting compartment without also stopping the bucket. ^{Safety appliance on crosshead}
- (2) All crossheads shall be of a design approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 337, *amended*. ^{Approval}

SHAFT CONVEYANCES, CONSTRUCTION AND OPERATION

Protection
of men
in shaft
conveyances

323. No cage or skip shall be used in a mine for the raising or lowering of persons unless it is constructed so as to prevent any part of the body of a person riding in it from accidentally coming into contact with the timbering or sides of the shaft or winze. 1961-62, c. 81, s. 338, *amended*.

Construc-
tion of
cages and
skips, etc.

324. All cages and skips used for lowering or raising persons in a mine shall comply with the following:

1. The hood shall be made of steel plate not less than three-sixteenths of an inch in thickness or of a material of equivalent strength.
2. The cage shall be provided with sheet-iron or steel side-casing not less than one-eighth of an inch in thickness or of a material of equivalent strength, and the casing shall extend to a height not less than five feet above the floor of the cage.
3. The cage shall be equipped with doors made of suitable material that extend to a height not less than five feet above the floor.
4. The doors shall be so arranged that it is impossible for the doors to open outward from the cage.
5. Doors shall be fitted with a suitable latch and shall have a minimum clearance at the bottom.
6.
 - i. The safety catches and mechanism shall be of sufficient strength to hold the shaft conveyance with its maximum load at any point in the shaft and shall be of a type the design of which has been approved by the chief engineer.
 - ii. Such safety catches and mechanism shall not be used until approved by the district electrical-mechanical engineer and such approval shall be based upon test performance.
 - iii. Such approval shall not be considered until the safety catches and mechanism are found to function satisfactorily under load conditions during such number of tests as are required by the chief engineer, each test to consist of suddenly releasing the shaft conveyance

in a suitable manner under maximum loading conditions for persons so that the safety catches will have the opportunity to grip the guides when the conveyance is descending at maximum rated speed.

- iv. A report of such tests shall be submitted to the chief engineer.
7. Before a shaft conveyance equipped with an approved type of safety catches and mechanism is first used for the purpose of lowering and raising persons, the safety catches and mechanism shall be found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test under the same conditions as set out in paragraph 6, and a permit for the use of the conveyance for lowering and raising men shall be obtained from the district mining engineer.
8. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
9. A shaft conveyance previously permitted for use by the district mining engineer for the purpose of lowering or hoisting persons on which alterations or repairs to the safety catch mechanism necessary to rectify any distortion of the mechanism from its proven satisfactory position are made shall not be put to such use until the safety catch and mechanism have been found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test made under the same conditions as set out in paragraph 6, and the district mining engineer has again issued permission for the use of the conveyance for such purpose.
10. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
11. A certificate of load capacity of the conveyance and attachments, which shall include the weight of the tail rope, if any, or other suspended load, shall be obtained from the manufacturer and made available to the district electrical-mechanical engineer.

12. Devices for attaching the conveyance to the rope shall have a factor of safety of not less than 10.



13. — (a) When newly installed, each device for attaching the rope or ropes to the conveyance shall have a factor of safety of not less than 10.

(b) When newly installed, or rebuilt, all bails, frame members and other parts affecting the safe operation of the conveyance shall have a factor of safety of not less than 10.



14. The bails and suspension gear of all shaft conveyances shall be cleaned and thoroughly inspected at least once in every twelve months and a record of such inspection shall be made in the Hoisting Machinery Record Book. 1961-62, c. 81, s. 339, *amended*.

Hoisting
without
safety
catches

325. The chief engineer may give permission in writing for hoisting men without safety catches if he is satisfied that the equipment and conditions are such that maximum safety is provided. 1961-62, c. 81, s. 340.

Operating
chairs by
lever

326. The cage shall not have chairs attached to it that are operated by a lever or a chain through or from the floor of the cage. 1961-62, c. 81, s. 341.

Automatic
operation
of chairs

327. When chairs are used for the purpose of landing a shaft conveyance at any point in a shaft or winze, other than at the lowest point of travel for a skip, they shall be so arranged that they automatically fall clear and remain clear of the hoisting compartment when the cage or other conveyance is lifted off. 1961-62, c. 81, s. 342.

Bails,
safety
latches, etc.

328. The bucket and any device such as the bail, safety latch or other attachment to the bucket shall be of a design approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 343, *amended*.

HOIST BRAKES

Brakes
required

329.—(1) Every device used for lowering into or hoisting from mine workings shall be equipped with a brake or brakes that may be applied directly to each drum so as to safely stop and hold the drum when carrying its maximum load. 1961-62, c. 81, s. 353 (1), *amended*.

- (2) The brakes shall be so arranged that they can be tested separately and, whether the hoist is at work or at rest, can be easily and safely manipulated by the hoistman when at the levers controlling the hoist. ^{Arranged to test separately}
- (3) No hoist used for lowering or raising persons or for shaft sinking shall be equipped with a brake or brakes operated by means of the hoistman's foot, unless such brake is an auxiliary electrical device. ^{Not operated by foot}
- (4) The adjustments of the brake or brakes and brake mechanism shall be maintained in such condition that the brake lever or any other part of the brake mechanism will not come to the limit of travel before the normal power of the brake or brakes is applied. ^{Adjustments to be maintained}
- (5) All brake engines shall be so equipped that, in the event of inadvertent or accidental loss of pressure in the brake system, the brakes can be applied. ^{Loss of brake pressure}
- (6) The brakes for a friction hoist shall be designed, adjusted and maintained to safely stop and hold the conveyance under all conditions of loading, direction of travel and speed. 1961-62, c. 81, s. 353 (2-6). ^{Brake for friction hoists}
- (7) At all times that persons are in or on a shaft conveyance, the hoist shall be equipped with more than one brake, each capable of safely stopping and holding the drum or drums in use. ^{Brakes}
- (8) In shaft inspection, maintenance or sinking operations, persons may be in or on a shaft conveyance attached to the fixed or clutched-in drum when changing balance. 1961-62, c. 81, s. 353 (7), *amended*. ^{Clutched-in drum}
- (9) At least one of the brakes required shall be arranged for automatic application upon operation of any of the safety devices for brake application. ^{Automatic operation}
- (10) In a brake system where weights are used to furnish auxiliary pressure on loss of air, the weights shall be tested at least once every twenty-four hours to ensure their freedom of movement. ^{Freedom of falling weights}
- (11) In the case of single drum air or steam driven hoists, automatic valves to control engine compression, arranged for operation by the safety devices, may serve as a brake. 1961-62, c. 81, s. 353 (8-10). ^{Single drum air or steam}
- (12) The arrangements mentioned in subsection 11 are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 353 (11), *amended*. ^{Idem}

HOIST CLUTCHES

Clutch-
locking
arrange-
ment

330. The device for operating the clutch of the drum shall be provided with adequate means to prevent the inadvertent withdrawal or insertion of the clutch. 1961-62, c. 81, s. 354.

Interlocking
brake and
clutch

331. The brake and clutch operating gear shall be so installed that it will not be possible to unclutch a drum unless the brake or brakes on the drum are applied, nor shall it be possible to release the brake or brakes until the clutch of the drum is engaged. 1961-62, c. 81, s. 355.

HOIST DRUMS

Securing of
drum parts

332. Such bolts and other fittings of the drums, brakes and clutches as might be a danger in the event of their becoming loosened shall be rendered secure by means of suitable locking devices other than spring lockwashers. 1961-62, c. 81, s. 356.

Slipping
of rope
on drum

333. On the drum of every hoist used for lowering or raising persons, there shall be flanges and also, if the drum is conical, such other appliances as are sufficient to prevent the rope or cable from slipping off. 1961-62, c. 81, s. 357.

Suitability
of hoist
drum for
rope

- 334.—(1) In all hoist installations, the dimensions of the drum or drums shall be suitable for the kind, diameter and length of the rope in service.

Bending
stresses
in rope

- (2) The diameters of the hoist drums shall be large enough to prevent the occurrence of unduly large bending stresses in the rope.

Rope risers

- (3) Where multiple-layer winding is used, proper arrangements shall be made and maintained to permit the rope to rise evenly from one layer to another and to wind properly without cutting down through any lower layer. 1961-62, c. 81, s. 358.

Drum hoist
installations

- 335.—(1) On and after the 15th day of June, 1948, in all installations of newly-acquired drum hoists and modifications of existing hoists designed to increase the load ratings of the hoist,

- (a) all hoist drums over sixty inches in diameter shall have grooving properly machined to fit the rope used, except that, in the case of shaft sinking, preliminary development operations and operations of a temporary nature, hoists with plain drums may be used;

- (b) the drums shall have sufficient rope-carrying capacity to permit hoisting from the lowest regular hoisting point to the highest point of travel in the shaft without the necessity of winding more than three layers of rope on the drum;
 - (c) the diameter of a hoist drum shall be not less than 80 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch and shall be not less than 60 times the diameter of the rope in use when the diameter of the rope is not greater than one inch, except that, in the case of shaft-sinking and preliminary development operations,
 - (i) a hoist may be used having a drum whose diameter is not less than 60 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch, and
 - (ii) a hoist may be used having a drum whose diameter is not less than 48 times the diameter of the hoisting rope in use when the diameter of the rope is not greater than one inch; and
 - (d) the hoist and the head sheaves shall be so located in relation to one another as to permit the proper winding of the rope on the hoist drum.
- (2) In any change of location of a hoist installed prior to the coming into force of this section, the requirements of clause *b* of subsection 1 apply. 1961-62, c. 81, s. 359 (1, 2). Change of location
- (3) In friction hoist installations, Friction hoist installations
- (a) the drum diameter of every friction hoist installed on or after the day on which this Part comes into force shall be not less than 100 times the diameter of the rope in use;
 - (b) the hoist drive, control and brakes shall be so designed and maintained that slippage of the rope on the drum will not occur under normal operating conditions; and
 - (c) the rope treads shall be inspected regularly and maintained in good condition; 1961-62, c. 81, s. 359 (3), *amended*.

Tapered
guides

- (d) in a friction hoist installation, tapered guides or other approved devices shall be installed above and below the limits of regular travel of the conveyance and arranged so as to brake and stop an overwound or underwound conveyance in the event of failure of other devices. 1961-62, c. 81, s. 365, *amended*.

SHEAVES

Head and
deflection
sheaves

- 336—(1) Head and deflection sheaves shall be machined and maintained to fit the rope properly.

Diameter
of head
sheaves

- (2) The diameter of a head sheave shall be determined by clause *c* of subsection 1 of section 335 as required for a hoist drum. 1961-62, c. 81, s. 360 (1, 2), *amended*.

Diameter
of deflection
sheaves

- (3) The diameter of a deflection sheave shall be determined by,
- (a) in the case of a drum hoist system, clause *c* of subsection 1 of section 335; and
 - (b) in the case of a friction hoist system, clause *a* of subsection 2 of section 335. *New*.

UTILITY HOISTS

Care of
utility
hoists

337. Utility hoists, including tugger hoists, ropes and other equipment used in connection with the installation, shall be maintained in a safe working condition. 1961-62, c. 81, s. 277, *amended*.

INDICATORS

Indicator
required

- 338.—(1) Every hoist shall, in addition to any marks on the rope or drum, be provided with a reliable depth indicator that will clearly and accurately show to the operator,
- (a) the position of the bucket, cage or skip;
 - (b) at what position in the shaft a change of gradient necessitates a reduction in speed;
 - (c) the overwind or underwind position of the shaft conveyance or counter-balance; and
 - (d) the position above or below the limits as in clause *c* beyond which the conveyance is not to move. 1961-62, c. 81, s. 363 (1), *amended*.

Operation
of indicator

- (2) Hoist depth indicators shall be driven by a reliable means.

Means
to adjust
indicator
on friction
hoist

- (3) Means shall be provided on a friction hoist to adjust the depth indicators and protective devices on the hoist to the position of the conveyance in the shaft. 1961-62, c. 81, s. 363 (2, 3).

OVERWINDING, ETC. — AIR HOISTS AND STEAM HOISTS

339. Air hoists and steam hoists shall be provided with suitable overwind, underwind and emergency protection for the hoisting conveyance, except that, in shaft-sinking, the underwind protection is not required. 1961-62, c. 81, s. 361, *amended*. Overwind and underwind protection
340. At all air hoists and steam hoists, there shall be installed within plain view of the operator a gauge to indicate the air or steam pressure, as the case may be. 1961-62, c. 81, s. 362, *amended*. Gauge required

SPECIFICATIONS AND SPECIAL TESTING

- 341.—(1) The specifications of hoists and equipment and the general arrangement of the headframe in new installations and in shaft deepening projects shall be approved by the chief engineer. Specifications required
- (2) Before a new hoisting installation is put in service, tests shall be conducted to prove its compliance with this Act. Commissioning tests
- (3) A record of such tests and the results obtained shall be kept on file and made available to the district electrical-mechanical engineer. Record kept available
- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific tests of the efficiency of all brakes, clutches, overwind devices or other hoist controls. 1961-62, c. 81, s. 364, *amended*. Special testing by the district electrical-mechanical engineer
- 342.—(1) All shafts, drums, mechanical linkage for controls, brake rods and other vital parts of a mine hoist which could affect the safety of the equipment shall be non-destructively tested before the hoist is placed in service. New equipment
- (2) Hoist and sheave wheel shafting, hoist brake and mechanical linkage for controls, conveyance drawbars, pins and structural members and other hoisting equipment affecting the safety of the installation shall be non-destructively tested at regular intervals or as required by the district electrical-mechanical engineer. Equipment in service

Reports
of tests

- (3) Dates of the non-destructive testing shall be recorded in the Machinery Record Book and the results shall be reported to the district electrical-mechanical engineer.

Approved
methods

- (4) The non-destructive testing shall be carried out by methods acceptable to the chief engineer. *New.*

EXAMINATION

Examina-
tion of
hoisting
equipment

343. The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to examine at least once in each week,
- (a) deflection, head and idler sheave wheels;
 - (b) attachments of the hoisting ropes to the drums and to the counterweights, buckets, cages or skips;
 - (c) brakes;
 - (d) interlocks;
 - (e) depth indicators;
 - (f) buckets;
 - (g) counterweights;
 - (h) cages;
 - (i) skips;
 - (j) external parts of the hoist;
 - (k) mechanical hoisting signalling equipment, if any;
 - (l) shaft dumping and loading arrangements;
 - (m) sinking doors and blasting sets, and any attachments thereto;
 - (n) attachments to any cage, skip or bucket for any underslung regularly-used equipment; and
 - (o) guide or rubbing rope tensioning devices and attachments,

and to record the report of such examination in a book called the Hoisting Machinery Record Book. 1961-62, c. 81, s. 366, *amended*.

HOISTING MACHINERY RECORD BOOK

- 344.—(1) The manager shall keep or cause to be kept at the mine the Hoisting Machinery Record Book referred to in section 343, in which shall be entered a report of every examination or report referred to in sections 324 and 343, subsection 2 of section 355, subsection 3 of section 359 and sections 360 and 361, and a notation of any failure of, accident to, correction or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, signed by the person making the examination or report. ^{Entering of reports}
- (2) Such entries shall be read and signed each day, week or month, as required by this Act, by the person in charge of such equipment or accessories thereto. ^{Entries to be signed}
- (3) A notation shall be made in the Hoisting Machinery Book of the action taken regarding the report of any failure of, accident to, corrections or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, over the signature of the person in charge of such equipment or accessories thereto. ^{What to be entered}
- (4) The Hoisting Machinery Record Book shall be made available to the engineer at all times. 1961-62, c. 81, s. 386, *amended*. ^{Books to be available}

HOISTING ROPES

- 345.—(1) The connecting device between the hoisting rope and the bucket, cage, skip, counterweight or other device shall be of such nature that the risk of accidental disconnection is reduced to a minimum. ^{Rope connection}
- (2) Such connecting device shall be of a design approved by the chief engineer. ^{To be approved}

No open
hooks

(3) No open-hook device shall be used for such purpose.

Fastened
to spider
on a drum
hoist

(4) The drum end of the rope shall be fastened to the spider of the drum or around the drum shaft in some suitable manner. 1961-62, c. 81, s. 368, *amended*.

Counter-
weight

(5) The rope from the counterweight shall be attached to the drum of the hoist and not to the shaft conveyance in drum hoist installations. 1961-62, c. 81, s. 384.

Splicing
prohibited

346. In no case shall a rope that has been spliced be used for hoisting purposes. 1961-62, c. 81, s. 369.

Length
of rope
required on
drum hoist

347.—(1) No drum hoist shall be operated with less than three turns of rope on the drum when the bucket, cage or skip is at the lowest point in the shaft from which hoisting is effected.

Three
layers only
on drum

(2) No drum hoist shall be operated with more than three complete layers of rope on the drum when the conveyance is at the highest point of travel in the shaft. 1961-62, c. 81, s. 370, *amended*.

Test
certificate

348.—(1) No hoisting rope, tail rope, guide rope, or rubbing rope shall be used that has not been tested by the Ontario Government Cable Testing Laboratory and for which a certificate of the test is not in the possession of the user.

Number
of test
specimens
required

(2) In friction hoist installations, where multiple ropes are used and when manufactured have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes,

(a) in the case of four ropes, two specimens shall be required;

(b) in the case of three ropes, two specimens shall be required;

(c) in guide and rubbing rope installations and where these ropes have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes.

Manufac-
turer's
certificate

(3) No hoisting rope, tail rope, guide rope or rubbing rope shall be used that is not accompanied by a certificate from the manufacturer giving the following information:

1. Name and address of manufacturer.
 2. Manufacturer's rope number.
 3. Date of manufacture.
 4. Diameter of rope in inches.
 5. Weight per foot in pounds.
 6. Rope construction.
 7. Class of core.
 8. Trade name of interior rope lubricant.
 9. Number of wires in strand.
 10. Grade of steel.
 11. Diameter of wires in decimals of an inch.
 12. Breaking stress of steel of which the wire is made in pounds per square inch.
 13. Standard torsion test of wires.
 14. Actual breaking load of rope, as provided by the certificate referred to in subsection 1.
 15. Length of rope.
- (4) When a rope is put into service in a shaft compartment or hoisting way, the data mentioned in subsection 3 shall be entered in a book called the Rope Record Book, together with the following information:
1. Name of person from whom purchased.
 2. Date of purchase.
 3. Date put on in present location.
 4. Identification number of rope.
 5. Name of shaft or winze and compartment in which rope is used.
 6. Weight of shaft conveyance.

7. Weight of material carried, or weight or tension applied to guide or rubbing rope.
8. Maximum length of rope in service below sheave or total length of guide or rubbing rope.
9. Maximum weight of rope in service below sheave or total weight of guide or rubbing rope.
10. Static factors of safety at conveyance suspension and at head sheave with rope fully let out, or at guide or rubbing rope suspension point.
11. Date put on and removed from previous locations, if any.

Information
to be sent
to chief
engineer

- (5) A copy of such entries shall be forwarded to the chief engineer at the time the rope is put on in any location.

Rope
Record
Book

- (6) The manager shall keep or cause to be kept at the mine a book called the Rope Record Book, in which shall be recorded, in addition to the information referred to in subsections 3 and 4, the following information:

1. A history of the rope, giving the date on which the rope was first put on.
2. Dates of shortening.
3. Dates and results of breaking and electromagnetic tests.
4. Date and reason for taking out of service, for each occasion the rope is put into and taken out of service.

Rope
Record
Book
open to
engineer

- (7) The Rope Record Book shall be available to the district electrical-mechanical engineer.

Notification
of rope
discarded

- (8) When a hoisting rope, tail rope, guide or rubbing rope is taken out of service from a shaft compartment, notice to that effect shall be forwarded to the chief engineer, giving the date, the reasons for discarding or discontinuing the use of the rope, disposition of the rope, and such other information as he requires. 1961-62, c. 81, s. 371, *amended*.



349.—(1) No hoisting rope, tail rope, guide or rubbing rope that has previously been in use in a place beyond the control of the manager shall be put in service anew, except with the permission in writing of the chief engineer. Permission required to use old rope

(2) Request for permission to use such rope shall be accompanied by certification that the rope has been properly examined and that no apparent defects have been found. Request for permission

(3) The rope shall be electro-magnetically tested throughout its length and copies of the results, together with the interpretations, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test was made. 1961-62, c. 81, s. 372, *amended*. Electro-magnetic test

350. No hoisting rope, tail rope, guide or rubbing rope that has been removed from service shall be put in service anew for the purpose of lowering or raising persons, unless proper measures have been taken for the maintenance of the rope and the manager is satisfied that the rope is in safe working condition. 1961-62, c. 81, s. 373, *amended*. Precautions, used ropes

351. When a shaft compartment has been abandoned for hoisting purposes, the hoisting rope shall be removed immediately from the shaft. 1961-62, c. 81, s. 374, *amended*. Rope removal

 352. No hoisting rope shall be reversed until approval in writing has been received from the chief engineer. 1961-62, c. 81, s. 375, *amended*. Rope not to be reversed 

353.—(1) For the purpose of this section, the factor of safety of the hoisting rope, tail rope, guide or rubbing rope in a shaft or winze of a mine means the number of times the breaking strength of the rope is greater than the total weight supported by the rope at a definite place in the rope. Safety factor of ropes, interpretation

(2) The breaking strength of the rope means the breaking strength of the rope as shown in the test certificate issued by the Ontario Government Cable Testing Laboratory before the rope is installed, as required by subsection 1 of section 348. Breaking strength of ropes, interpretation

Safety
factor of
drum hoist
ropes

- (3) Every hoisting rope, when newly installed on a drum hoist, shall have a factor of safety of not less than 8.5 at the end of the rope where it is attached to the conveyance and where the total weight consists of the combined weight of the conveyance and the maximum load to be carried.

Idem

- (4) In addition, the hoisting rope, when newly installed, shall have a factor of safety of not less than 5 at the point where the rope leaves the head sheave and, the rope being fully let out, the total weight consists of the combined weight of the conveyance plus the maximum load to be carried plus the weight of that part of the rope that extends from the head sheave to the conveyance.

Safety
factor for
friction
hoist ropes

- (5) The factor of safety of the hoisting ropes for a given friction hoist installation is the lowest actual breaking strength, as determined by the Ontario Government Cable Testing Laboratory, for the ropes, times the number of ropes, divided by the sum weight of the conveyance and attachments, the maximum conveyance load carried and the maximum weight of rope suspended in one compartment of the shaft.

Idem

- (6) When the hoisting rope is installed on a friction hoist, the factor of safety shall be not less than that determined from the following formula: $F. \text{ of } S. = 8.0 - .0005 d$, where d is the maximum length of rope suspended below the head sheave in feet.

Idem

- (7) For friction hoists, the factor of safety of the hoisting ropes shall be not less than 5.5 for any depth of shaft when the ropes are installed.

Safety
factor of
tail ropes

- (8) The factor of safety of tail ropes shall be not less than 7 when installed.

Safety
factor of
guide and
rubbing
ropes

- (9) The factor of safety of guide and rubbing ropes shall be not less than 5 when installed. 1961-62, c. 81, s. 376, *amended*.

Rope
discard
criteria

- 354.—(1) No hoisting rope shall be used in a shaft or winze of a mine where in any part of the rope,

- (a) the existing strength has decreased to less than 90 per cent of the original strength of the rope;
- (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;

- (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
 - (d) marked corrosion occurs;
 - (e) the rate of stretch in a friction hoisting rope begins to show a rapid increase over the normal stretch noted during its service. 1961-62, c. 81, s. 377, *amended*.
- (2) No tail rope, guide or rubbing rope shall be used in a ^{Idem} shaft where in any part of the rope,
- (a) the existing strength has decreased to less than 75 per cent of the original strength of the rope;
 - (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;
 - (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
 - (d) marked corrosion occurs. *New*.
- 355.—(1) The rope dressing used on a drum hoisting ^{Rope dressing} rope shall be suited to the operating conditions of the rope, and the dressing shall be applied at least once in every month and as often as is necessary to maintain the coating on the rope in good condition.
- (2) Every time the rope is dressed, a report of the ^{Idem} treatment shall be recorded in the Hoisting Machinery Record Book and signed by the person who performed the work. 1961-62, c. 81, s. 378.
- 356.—(1) After 18 months of service, and thereafter at ^{Testing of hoisting ropes} intervals of six months, the hoisting rope of a drum hoist shall have a portion not less than 8 feet in length cut off the lower end from a position above the clamps or other attachment.
- (2) The portion of rope so cut shall have the ends adequately fastened with binding wire before the cut is made to prevent the disturbance of the strands and it shall be sent to the Ontario Government Cable Testing Laboratory for a breaking test. 1961-62, c. 81, s. 379 (1, 2), *amended*.

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| Recording of test | (3) The certificate of the test shall be kept on file and a summary thereof recorded in the Rope Record Book. 1961-62, c. 81, s. 379 (4). |
| Electro-magnetic testing | (4) All hoisting ropes on drum hoists and friction hoists shall be tested throughout their working length by an electro-magnetic testing device within the first six months of service, and thereafter at intervals of four months, or as required by the chief engineer. |
| Idem | (5) All tail ropes, guide and rubbing ropes shall be electro-magnetically tested at the end of twelve months service, and thereafter at such intervals as is necessary to ensure that the rope is in safe condition. |
| Idem | (6) The electro-magnetic testing service and the agency or company supplying such service shall be approved by the chief engineer. |
| Tests to be recorded | (7) The dates and results of the electro-magnetic tests shall be entered in the Rope Record Book. |
| Submission of results | (8) Records of each electro-magnetic test, including graphs and interpretations, over the signature of the person making the interpretation, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test is made. <i>New.</i> |
| Special testing of used hoisting ropes | 357.—(1) The chief engineer may require that test specimens be cut from any rope discarded for use in mine hoisting at points specified by him and sent to the Ontario Government Cable Testing Laboratory for special testing and investigation if he is of the opinion that such testing and investigation are in the interests of better mine hoisting practice. |
| No charge for testing | (2) No charge shall be made for such special testing and investigation, but the mine is responsible for the cost of cutting, preparation and shipment of the test specimens. 1961-62, c. 81, s. 380, <i>amended.</i> |

CLEARANCE FOR TAIL ROPES

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|------------------------|--|
| Tail ropes to be clear | 358. Water and spillage in a shaft sump in a mine shall be kept at such a level at all times that, <ul style="list-style-type: none"> (a) tail ropes have clear passage; and (b) guide and rubbing rope connections and tension devices are clear. 1961-62, c. 81, s. 381, <i>amended.</i> |
|------------------------|--|

ROPE ATTACHMENTS

- 359.—(1) Any rope in hoisting service when newly put on, and after any subsequent loosening of the connecting attachments between the rope and the bucket, cage, skip or counterweight and the connection between the rope and the hoist drum, shall have the attachments carefully examined by a qualified person or persons authorized by the manager and shall not be used for ordinary transport in a shaft or winze until two complete trips up and down the working parts of the shaft or winze have been made with the bucket, cage, skip or counterweight bearing its authorized load, and the connecting attachments have been re-examined. 1961-62, c. 81, s. 382 (1), *amended*. Examination of attachments
- (2) The hoistman shall make a record of such two complete trips in the Hoistman's Log Book. Record to be kept
- (3) The results of the examination of the connecting attachments between the bucket, cage, skip or counterweight and hoist drum and the rope shall be recorded in the Hoisting Machinery Record Book and signed by the person making the examination. 1961-62, c. 81, s. 382 (2, 3). Results to be recorded
- 360.—(1) In drum hoist installations, after every six months of service, that portion of the rope at the conveyance end within the clamps shall be cut off and discarded. Cleaning and examination of rope connections
- (2) At such time, the connection between the rope and the drum shall be thoroughly cleaned and examined. Idem
- (3) In friction hoist installations, after every six months of service, the position of the hoisting rope within the clamps shall be changed, if practicable, or that portion of the rope within the clamps shall be thoroughly cleaned and examined. Idem
- (4) Every six months, the tail rope, guide and rubbing rope attachments and tensioning devices shall be thoroughly cleaned and examined. 1961-62, c. 81, s. 383, *amended*. Idem

EXAMINATION OF ROPES AND SAFETY APPLIANCES

- 361.—(1) The manager shall depute a competent person or persons who shall examine, Examination of ropes and safety appliances

- (a) at least once in each day, the exterior of the hoisting rope and tail rope to detect the presence of kinks or other visible damage and to note the appearance of the rope dressing;
- (b) at least once in each month, the structure of that portion of the hoisting rope that is not on the hoist drum when the conveyance is at its lowest stopping point, and the tail, guide and rubbing ropes, with a view to ascertaining the deterioration thereof, and for the purpose of this examination the rope shall be cleaned at points selected by such person or persons, who shall note any reduction in the diameter or circumference of and the proportion of wear in the rope, and the starting point of the examination shall be changed slightly from month to month in order to obtain more complete information, but any portion showing appreciable reduction in diameter or circumference or appreciable wear shall be checked when the rope is again examined;
- (c) at least once in each month, the portion of the rope that normally remains on the drum of a drum hoist when the conveyance is at its lowest stopping point, and shall lubricate such portion, and, if, during the examination of the rope, significant deterioration is found in the portion on the drum or at the cross-over points, the rope shall be shortened sufficiently to eliminate any crushed portion or to change the position of the cross-over points if either or both are necessary;
- (d) at least once in each day, the safety catches, if any, of the conveyance, to be sure they are clean, sharp and in proper adjustment and working condition;
- (e) at least once in every three months, the safety catches of the cage or other shaft conveyance so equipped by testing the same, such test to consist of releasing the empty conveyance suddenly in some suitable manner from rest so that the safety catches have the opportunity to grip the guides, and, in case the safety catches do not act satisfactorily, the cage or other shaft conveyance shall not be used further for lowering or raising men until the

safety catches have been repaired and have been proved to act satisfactorily, as referred to in paragraph 11 of section 324. 1961-62, c. 81, s. 385 (1), *amended*.

- (2) In friction hoist installations, the stretch of the hoisting rope or ropes shall be measured and recorded in the Friction Hoist Machinery Record Book. Stretch to be recorded
- (3) In friction hoist installations, measurement of rope diameters and the location and number of broken wires shall be recorded monthly in the Friction Hoist Machinery Record Book. 1961-62, c. 81, s. 385 (2, 3). Rope diameters and broken wires to be recorded
- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or cause to be conducted specific tests of the safety catches with which a conveyance is equipped. Engineer may conduct tests
- (5) If on examination there is discovered any weakness or defect whereby the safety of persons may be endangered, the weakness or defect shall be immediately reported to the manager or person in charge and, until the weakness or defect is remedied, the hoisting plant shall not be used. 1961-62, c. 81, s. 385 (4, 5), *amended*. Defects to be remedied at once
- (6) It is the duty of the person referred to in subsection 1 to record the reports of all examinations therein referred to and also to record all reports referred to in subsection 5 in a book called the Hoisting Machinery Record Book or the Friction Hoist Machinery Record Book, whichever is applicable. 1961-62, c. 81, s. 385 (6). Recording of examination and reports

HOIST LOADING

362.—(1) In this section,

Interpretation

- (a) "authorized maximum load of persons" means the total weight of persons permitted by the district mining engineer to be carried at any time in the shaft conveyance;
- (b) "maximum allowable weight" means the maximum weight permitted by this Part to be attached to the rope in service or the maximum weight attached to the rope that the hoist is capable of handling or the maximum weight of material that the conveyance is capable of handling whichever is the least. 1961-62, c. 81, s. 318 (1), *amended*.

Rated
loading,
drum hoists

- (2) Every drum hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum permissible rope pull for each drum and the maximum permissible suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. 1961-62, c. 81, s. 367 (1), *amended*.

Rated
loading,
friction
hoists

- (3) Every friction hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum rated unbalanced load and the maximum rated suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. *New*.

Approval
for
increased
capacity

- (4) No alterations designed to increase the hoisting capacity shall be made to a hoist unless approval is given by its manufacturer or an independent person approved by the chief engineer. 1961-62, c. 81, s. 367 (2), *amended*.

Determina-
tion of
maximum
load on
conveyance,
drum hoists

- (5) Except as provided in clause *b* of subsection 1, the maximum allowable load to be lowered or raised on the shaft conveyance of a drum hoist means the maximum allowable weight at the end of the rope less the weight of the conveyance.

Idem,
friction
hoists

- (6) The maximum material-load allowed on the conveyance of a friction hoist shall be determined from the lesser of the following calculations:

1. Maximum allowable suspended load on the hoist, less the weight of the hoisting ropes, less the weight of tail ropes, less the weight of the conveyances and the attachments.
2. The breaking strength of the rope, divided by the required factor of safety, minus the maximum weight of rope suspended in one compartment, minus the weight of the conveyance and attachments in that compartment; and, where multiple ropes are used, the lowest breaking strength of any rope shall be used for all ropes in load calculations.
3. The unbalanced load on the hoist as rated by the manufacturer, which shall not be exceeded.

4. The maximum allowable load on any conveyance, which shall not be greater than that for which the conveyance was rated by the manufacturer. 1961-62, c. 81, s. 318 (7), *amended*.

- (7) Where a shaft conveyance is used for the lowering or raising of both persons and materials, the weight on the conveyance when handling its authorized maximum load of persons, shall not exceed 85 percent of the maximum allowable weight permitted for materials. 1961-62, c. 81, s. 318, (3, *part*, 4), *amended*. Maximum persons load when conveyance also used for materials
- (8) The manager shall obtain from the district mining engineer resident in the district a certificate in writing setting out the maximum loads of persons or materials that may be carried in the shaft conveyance before persons are so carried. 1961-62, c. 81, s. 318 (3), *part*, *amended*. Certificate respecting maximum loads
- (9) The district mining engineer may issue the certificate referred to in subsection 8 if he is satisfied that the hoisting installation and signalling equipment meet the requirements of this Act. 1961-62, c. 81, s. 318 (5), *amended*. When certificate issued

SHAFT HOISTING PRACTICE

- 363.—(1) The hoisting of persons or materials in a mine shaft by automatic control is subject to the approval of the chief engineer. Hoisting by automatic control
- (2) Where a hoist in a mine is being operated by automatic control and no other means of hoisting persons is provided, there shall be available a person qualified to operate the hoist manually when persons are underground. 1961-62, c. 81, s. 303, *amended*. Idem
- 364.—(1) Where steel, timber or other material is being lowered or raised in a shaft conveyance in a mine, it shall be loaded in such a manner as to prevent it from shifting its position, and, if necessary, it shall be secured to the conveyance. Lowering and raising material

- Long material properly secured (2) When such material projects above the sides of the conveyance, it shall be securely fastened to the conveyance or lashed to the hoisting rope in such a manner as not to damage the rope. 1961-62, c. 81, s. 304, *amended*.
- Compartment to be lined where crosshead not used 365. Where a crosshead is not used in a vertical shaft or winze in a mine, the compartment in which the bucket works shall be closely lined with sized lumber. 1961-62, c. 81, s. 305, *amended*.
- Level of load in bucket or skip 366. In the course of sinking a shaft or winze in a mine, the bucket or skip shall be filled only in such a manner that no piece of loose rock projects above the level of the brim. 1961-62, c. 81, s. 306, *amended*.
- Hoisting men in buckets 367. In shaft-sinking operations in a mine, where the hoisting speed exceeds 1,000 feet per minute, persons shall ride in the bucket above the bottom crosshead stop. 1961-62, c. 81, s. 307, *amended*.
- Lowering men after blast 368.—(1) During sinking operations in a shaft or winze in a mine, the bucket or skip used for returning persons to the working place following a blasting operation shall not be lowered on the initial trip beyond the point where, owing to the blast, it may be unsafe to go without a careful examination, and in no case shall the point be less than fifty feet above the blasting set or bulkhead.
- Idem (2) The bucket or skip shall be lowered from such point only on signal from the persons accompanying it and at such speed as to be fully under control, by signal, of such persons.
- Idem (3) Only sufficient persons shall be carried on such a trip as are required to properly conduct a careful examination of the shaft or winze. 1961-62, c. 81, s. 308, *amended*.
- Bucket or skip not to be lowered directly to face 369. In the course of sinking a shaft or winze in a mine, the bucket or skip shall not be lowered directly to the bottom but shall be held at least fifteen feet above the bottom and shall remain there until a separate signal to lower it has been given by an authorized person. 1961-62, c. 81, s. 309, *amended*.
- Bucket to be steadied 370. No bucket shall be allowed to leave the top or bottom of a shaft or winze in a mine until the person in charge of it has steadied it or caused it to be steadied. 1961-62, c. 81, s. 310, *amended*.

- 371.—(1) In the course of sinking a shaft or winze in a mine, adequate provision shall be made and maintained to ensure the impossibility of the bucket or skip being dumped while the dumping doors are open and means shall be applied to prevent spillage from falling into the shaft or winze. ^{Protection from dumping}
- (2) A door or doors to cover the sinking compartments shall be provided and maintained at the collar or other point of service of every shaft or winze in a mine while sinking is in progress. ^{Door to cover sinking compartment}
- (3) The design of the things required under subsections 1 and 2 shall be submitted for the approval of the district electrical-mechanical engineer before such things are installed. ^{Design to be approved}
- (4) The door or doors referred to in subsection 2 that are at the point of loading shall be kept closed when tools or material are being loaded into or unloaded from the bucket or skip, except when the bucket or skip is unloaded by dumping arrangements as provided for in subsection 1. ^{Doors to be closed}
- (5) The door or doors referred to in subsection 2 shall be closed when persons are loaded or unloaded, except where a safety crosshead fills the compartment at the collar or other point of service. 1961-62, c. 81, s. 311, *amended*. ^{Idem}
- (6) Any doors or other shaft fixture which when moved into the travel area of a shaft compartment would interfere with free passage of the conveyance shall be so equipped that their position is indicated to the hoistmen by signal lights. *New*. ^{Warning of obstruction}
372. Except during sinking operations, whenever a mine shaft or winze exceeds 300 feet in vertical depth, a suitable cage or skip constructed as required by sections 323 and 324 shall be provided for lowering or raising men in the shaft or winze. 1961-62, c. 81, s. 312, *amended*. ^{Cage for handling men}
- 373.—(1) No person shall travel or be permitted to travel in a cage at any time, except during shaft inspection, unless the doors of the cage are securely closed. 1961-62, c. 81, s. 313 (1). ^{Cage doors to be closed}
- (2) The doors of a cage shall not be opened until a full stop has been made at the point or station signalled except, ^{Idem}

(a) during trips of inspection; and

(b) as permitted by subsection 3. 1961-62, c. 81, s. 313 (2), *part, amended*.

Idem

(3) In the case of an inadvertent stop at a point in the shaft or winze other than a station, the cage doors may be opened and then persons may leave the cage only on the instructions of an authorized person outside the cage. 1961-62, c. 81, s. 313 (2), *part, amended*.

Operation
of chairs

374.—(1) Where chairs are used for the purpose of landing a shaft conveyance at a point in a shaft or winze, except when hoisting in balance from that point, the chairs shall not be put into operation unless the proper chairing signal has been given to the hoistman.

Idem

(2) Chairs shall not be used when persons are in or on a shaft conveyance. 1961-62, c. 81, s. 314, *amended*.

Hoisting
persons and
material
simul-
taneously

375.—(1) Except as provided for in clause *c* of section 376, no person shall travel or be permitted to travel in a bucket, cage or skip operated by a hoist that is being simultaneously used for the hoisting of mineral or material.

Persons
only in
approved
conveyances

(2) No person shall be lowered or raised or permit himself to be lowered or raised in a shaft or other underground opening except in an approved raise climber, or a scaling platform, or in an approved hoisting conveyance as provided for in section 376, but this prohibition does not apply where persons are lowered or raised by hand or by means approved by the district electrical-mechanical engineer for use in construction, maintenance or repair work. 1961-62, c. 81, s. 315, *amended*.

When
persons
not to be
hoisted

376. No person shall be lowered or raised or allow himself to be lowered or raised in a shaft, winze, or other underground opening of a mine,

(a) in a bucket or skip, except that persons employed in shaft sinking may ascend and descend to and from the sinking deck or other place of safety and the persons employed in shaft inspection and maintenance may be lowered or raised in the shaft by means of such conveyance;

- (b) in a cage or skip that does not meet the requirements of sections 324 and 326, except as provided for in clause *a* of this section or section 325;
- (c) in a cage, skip or bucket that is loaded with explosives or blasting agents, steel, timber or other material or equipment, except where such person is authorized to handle such material in a cage, skip or bucket and the materials are adequately secured as required by section 364, but nothing in this clause prohibits persons from carrying personal hand tools or equipment approved by the district mining engineer in a shaft conveyance if such tools or equipment are properly protected with guards and the conveyance is not overcrowded;
- (d) in any shaft conveyance, except during shaft sinking operations or shaft inspection and maintenance operations, except where a person authorized to give signals is in charge of the shaft conveyance. 1961-62, c. 81, s. 316, *amended*.
377. Except in the course of sinking a shaft in a mine, no person shall enter or be allowed to enter a shaft conveyance or work upon or under a shaft conveyance when the corresponding drum of the hoist is unclutched, unless the conveyance is first secured in position by chairing or blocking. 1961-62, c. 81, s. 317, *amended*. Use of conveyance if drum unclutched
378. Permission shall be obtained from the chief engineer before a skip or bucket is used for lowering or raising persons in a shaft or winze of a mine, except during sinking, inspection or maintenance operations. 1961-62, c. 81, s. 338 (2), *amended*. Permission necessary to handle men in skip or bucket
379. Where a bucket is used in a shaft or winze in a mine for other than sinking purposes, Use of shaft buckets
- (a) a set of doors as required by subsection 2 of section 371 shall be installed at the collar and every point of service of the shaft or winze;
- (b) a suitable landing device shall be used at every working level when the bucket is being loaded or unloaded at that level; and

- (c) simultaneous operations shall not be carried on at more than one level until the style of structure and method of operation of any such device installed at intermediate levels have been submitted to and have received the approval of the district mining engineer. 1961-62, c. 81, s. 270, *amended*.

CONVEYANCE NOTICES AND DISCIPLINE

Notice
to be
posted

- 380.—(1) A notice showing clearly the number of persons allowed to be carried in and the weight of materials allowed to be loaded on the conveyance, as referred to in subsection 6 of section 362, shall be posted and maintained at the collar of the shaft or winze.

Respons-
ibility

- (2) The person authorized to give signals is responsible for the observance of such notice. 1961-62, c. 81, s. 319, *amended*.

Lamps

- 381.—(1) When persons are being lowered or raised in a cage or skip, no person, other than the cagetender or skiptender, shall have a burning open-flame lamp of any kind, except that, for shaft inspection or similar purposes, a sufficient number of lighted lamps shall be permitted.

Discipline
to be
maintained

- (2) When persons are being lowered or raised in a cage or skip a proper discipline of the persons riding in the cage or skip shall be maintained.

Obstruction
prohibited

- (3) No person shall obstruct the enforcement of the requirements of subsection 1 of section 380 or this section. 1961-62, c. 81, s. 320, *amended*.

SIGNALS

Signal
systems

382. Every working shaft in a mine shall be provided with a suitable means of communicating by distinct and definite signals to the hoist room from the bottom of the shaft, from every working level, from the collar and from every landing deck. 1961-62, c. 81, s. 321, *amended*.

Separate
system
for each
compartment

383. A separate, audible signal system shall be installed for the control of each hoisting conveyance operated from a single hoist in a mine, and there shall be a sufficient difference in the signals to the hoistman so that they are easily distinguishable. 1961-62, c. 81, s. 322, *amended*.

- 384.—(1) Where an electrical signal system is installed in a mine, the hoistman shall return the signal to the person giving the signal when persons are about to be lowered or raised. 1961-62, c. 81, s. 323, *amended*. ^{Return signals}
- (2) Where multi-deck staging is being used for shaft-sinking in a mine, an audible or visible return signal system shall be installed and used. *New*. ^{Idem, multi-deck staging}
385. No device for signalling to or communicating with the hoistman shall be installed or operated in or on any shaft conveyance in a mine without the written permission of the chief engineer. 1961-62, c. 81, s. 324, *amended*. ^{Special devices}
386. No cage call system communicating with the hoist-room shall be installed or used at a shaft or winze in a mine. 1961-62, c. 81, s. 325, *amended*. ^{Cage call system}
- 387.—(1) The following code of signals shall be used at every mine and a copy of such code shall be printed and kept posted in every hoist room and at every level or other recognized landing place in every working shaft or winze: ^{Code of signals}
- 1 bell Stop immediately — if in motion
(Executive Signal).
- 1 bell Hoist (Executive Signal).
- 2 bells Lower (Executive Signal).
- 3 bells Men travelling in hoisting conveyance (Cautionary Signal). This signal shall be given by the conveyance tender at all levels before any person, including the conveyance tender, is permitted to enter or leave the conveyance. Where a stop exceeds one minute, the 3-bell signal shall precede the next destination signal. Where a return-bell signal system is installed, the hoistman shall return the 3-bell signal before any person is permitted to enter or leave the conveyance.
- 4 bells Blasting Signal. The hoistman shall answer by raising the bucket, cage or skip a few feet and letting it back slowly. Following a 4-bell signal, only

a 1-bell signal shall be required to signal for hoisting persons away from a blast and the hoistman shall remain at the controls until the act of hoisting has been completed.

5 bells . . . Release Signal. The hoistman may act at his own discretion to perform any movements, or series of movements, involving the conveyance or conveyances designated by the destination signals referred to in section 388. Where a return-signal system is installed, the hoistman shall return the signals and may then act at his own discretion. On the completion of the necessary movements, he shall not move the hoist again until he has received a new signal.

9 bells . . . Danger Signal (Special Cautionary). To be given only in case of fire or other danger. The signal for the level at which the danger exists should be given following the giving of the danger signal. This signal to be given only on the call system or voice communication system except in shaft sinking and maintenance. 1961-62, c. 81, s. 326 (1), *amended*.

Method
and order
of signals

(2) The following method and order shall be observed in giving signals:

1. Strokes on the bell shall be made at regular intervals.
2. Signals shall be given in the following order: 1st, Cautionary Signals; 2nd, Destination Signals; 3rd, Executive Signals. 1961-62, c. 81, s. 326 (2).

Special
signals

388.—(1) At every mine, other signals, termed destination signals, in conjunction with the code set forth in subsection 1 of section 387 shall be used to designate all regular stopping points. 1961-62, c. 81, s. 327 (1), *amended*.

Idem

(2) Special signals shall be used to designate all special hoisting movements. 1961-62, c. 81, s. 327 (2).

(3) Special signals shall be easily distinguishable from ^{Idem} the code set forth in subsection 1 of section 387 and shall not interfere with it in any way and shall follow the Department's standard mine signal code, and any deviation from the latter shall be approved by the chief engineer.

(4) Such destination signals and other special signals ^{Idem} approved for use at any mine and an adequate description of their application to the movements required shall be posted at every hoist, at the top of the shaft or winze and at every working level of the shaft or winze. 1961-62, c. 81, s. 327, *amended*.

389.—(1) Except as provided in subsection 2, the hoistman shall not move the hoisting conveyance within a period of ten seconds after receiving a signal designating a movement at any time that persons are carried. 1961-62, c. 81, s. 328 (1), *amended*. ^{Hoistman not to move conveyances}

(2) The waiting period mentioned in subsection 1 is not required where throughout the shaft or winze the executive signal given only after the hoisting conveyance doors and the shaft gates have been completely closed and the person giving the signal is inside the conveyance or in the shaft station or other recognized landing place. ^{Where waiting period not required}

(3) In case the hoistman is unable to act within one minute of the time he has received any complete signal, he shall not move the hoisting conveyance until he has again received another complete signal. 1961-62, c. 81, s. 328 (2), *amended*. ^{If unable to act within one minute}

390.—(1) After a hoistman has received a 3-bell signal, he shall remain at the hoist controls until he has received the signal designating the movement required and has completed that movement. 1961-62, c. 81, s. 329 (1). ^{3-bell signal}

(2) After the hoistman has commenced the movement, ^{Idem} he shall complete it without interruption, unless he receives a stop signal or in case of emergency. 1961-62, c. 81, s. 329 (2), *amended*.

391. Except in case of emergency, no person shall speak ^{Talking to hoistman} to the hoistman while the hoist is in motion, and a sign to this effect plainly visible to any person approaching the hoist controls shall be kept posted at all times. 1961-62, c. 81, s. 331, *amended*.

Signal
required

392.—(1) Except as provided in subsection 2, the hoistman shall not move the hoisting conveyance until he has received a proper signal. 1961-62, c. 81, s. 332, *part, amended*.

Exception

(2) In the event of an inadvertent stop at some point in the shaft or winze other than at a station from which a signal may be given, the hoistman may move the conveyance when he has assured himself that the hoist controls are in proper working order and, when lowering or raising persons he has received instructions from an authorized person. 1961-62, c. 81, s. 332, *part, amended*.

Only
authorized
persons
to give
signal

393.—(1) No person, unless he is authorized so to do, shall give any signal for moving or stopping a bucket, cage or skip in a mine.

Idem

(2) No unauthorized person shall give any signal or in any way interfere with the hoist signalling arrangements.

Voice com-
munication

394.—(1) A system shall be installed in any active shaft or winze to provide voice communication between the collar and regular landing places. 1961-62, c. 81, s. 334 (1) *amended*.

Idem

(2) Such installations shall be provided at suitable intervals. *New*.

Position of
conveyance

395. No signal shall be given unless the bucket, cage or skip is at the level from which the signal is to be given. 1961-62, c. 81, s. 335.

Hoistman
to remain
at controls

396.—(1) Except when the hoist is operating under automatic control, the hoistman shall remain at the hoist controls at all times the hoist is in motion. 1961-62, c. 81, s. 330, *amended*.

Idem

(2) Before a hoistman leaves the hoist controls, he shall ensure that the brakes are fully set and that there will be no inadvertent motion of the hoist drums. *New*.

Only
authorized
persons may
operate
hoist

(3) No person, unless he is authorized so to do, shall operate any equipment for controlling the movement of the hoist or interfere with the equipment. 1961-62, c. 81, s. 333, *amended*.



HOISTING PROCEDURE

- 397.—(1) If at the commencement of a shift there has ^{Hoisting after stoppages} been a stoppage of hoisting in a shaft for a period exceeding two hours duration, no regular hoisting shall be done until the shaft conveyance has made one complete trip through the working part of the shaft or, where shaft repairs have been made, a return trip of the shaft conveyance has been made through and below the affected part of the shaft.
- (2) The hoistman shall record all such stoppages and ^{Record of stoppages} trips in the Hoistman's Log Book. 1961-62, c. 81, s. 344, *amended*.
398. Where a hoist is equipped with an auxiliary overwind ^{Man safety device} device for preventing persons from being hoisted to the dumping position in skips or in skips of skip-cage assemblies as required in section 533, the hoistman shall place the device in operation or assure himself that it is in operation at all times that persons are in or on the conveyance. 1961-62, c. 81, s. 345, *amended*.
399. Where obstructions such as those referred to in ^{Obstructions} section 527 may exist, the hoistman shall not lower or raise the shaft conveyance without proper authority. 1961-62, c. 81, s. 346, *amended*.
400. All overwind and underwind devices shall be tested ^{Testing overwind devices} at least once during every twenty-four hours of operation and a record of the test shall be posted immediately in the Hoistman's Log Book. 1961-62, c. 81, s. 347, *amended*.
- 401.—(1) The operator of a hoist shall, after going on ^{Brakes to be tested} shift and before a shaft conveyance is lowered or raised, assure himself that the brake or brakes are in proper condition to hold the loads suspended on the corresponding drum or drums by testing the brakes of the drums against the normal starting power of the engine or, in the case of an electric hoist, against the normal starting current.
- (2) The operator of a hoist shall not unclutch a drum of ^{Drum not to be unclutched} the hoist until the test mentioned in subsection 1 has been made. 1961-62, c. 81, s. 348, *amended*.
- 402.—(1) Where a hoist is fitted with a friction clutch, the ^{Friction clutches} operator shall, after going on shift and before a conveyance is lowered or raised, test the holding power

of the clutch, the brake of the corresponding drum being kept on and the brake of the other drum being kept off.

Idem

- (2) In the case of a steam or air hoist, the test mentioned in subsection 1 shall be made against the normal starting power of the engine and, in the case of an electric hoist, against the normal starting current. 1961-62, c. 81, s. 349, *amended*.

Use of
brake when
drum
unclutched

- 403.—(1) When the drum of a hoist is unclutched, the brake of the drum shall be used only for the purpose of maintaining the drum in a stationary position, and no lowering shall be done from an unclutched drum. 1961-62, c. 81, s. 350.

Unclutching
procedure

- (2) Before commencing unclutching operations, the hoistman shall ensure that the brakes have been applied on both hoist drums. *New*.

When
clutch to be
kept in

- (3) When persons are in or on a shaft conveyance, the corresponding drum of the hoist shall be kept clutched in. 1961-62, c. 81, s. 351, *amended*.

HOISTMAN'S LOG BOOK

Hoistman's
Log Book

- 404.—(1) At every shaft or winze hoist, there shall be kept a Hoistman's Log Book in which the following shall be recorded:

1. A report of the working condition of the hoist, including the brakes, clutches, interlocking devices between the brake and clutch, depth indicators and all other devices and fittings pertaining to the safe operation of the hoist.
2. A report of the working condition of the signalling apparatus and a notation of any signals received by the hoistman, the accuracy of which he has questioned.
3. Any special instructions received involving the safety of persons, such entry to be signed by the hoistman and by the person issuing the instructions.
4. A report of the tests of the overwind and underwind devices.

5. Where the required tests of the overwind and underwind devices are conducted by a hoistman operating on another shift, the hoistman assuming duty shall note over his signature that he has examined the entry in the log book of the hoistman who performed the tests.
6. A report of all abnormal circumstances in connection with the operation of the hoist or attachments thereto and such abnormal conditions as have come to the hoistman's knowledge in connection with the hoisting operations in the shaft or winze.
7. A report of all trial trips referred to in sections 359 and 397.

- (2) A notification to the hoistman on a succeeding period ^{Idem} of duty of any special circumstances or matter affecting the continued operation of the hoist or the safety of persons in the shaft or winze shall be made in the Hoistman's Log Book. 1961-62, c. 81, s. 352 (1, 2).
- (3) All such entries shall be read and countersigned by ^{Idem} the hoistman assuming duty for the succeeding period. 1961-62, c. 81, s. 352 (3), *amended*.
- (4) Such entries as are required by this section shall be ^{Idem} made and signed by every hoistman for his period of duty on a shaft or winze hoist and the time and duration of his period of duty shall also be noted, and such entries as have been made during the preceding twenty-four hours shall be read and countersigned each day by the master mechanic or other authorized person. 1961-62, c. 81, s. 352 (4).
- (5) The log book shall be available to the district engineer at all times. *New*.

RAISE CLIMBERS

- 405.—(1) Raise climbers shall be fitted with more than ^{Brakes} one means of braking, each capable of stopping the climber and holding it in place.
- (2) The operator of a raise climber shall ensure at the ^{Testing of} beginning of his shift that the brakes are in safe working condition.
 - (3) Raise climbers shall be maintained in safe operating ^{Mainten-} condition.
 - (4) The rated load capacity of a raise climber as certified ^{Load} by the manufacturer shall not be exceeded.



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| Log book | (5) Where raise climbers are used pursuant to section 263 or subsection 2 of section 375, an approved log book shall be maintained. |
| Record kept | (6) A record of inspections, maintenance and repairs shall be maintained in the log book. |
| Availability to engineer | (7) The log book shall be available to the district engineer at all times. 1961-62, c. 81, s. 387, <i>amended</i> . |

PITS AND QUARRIES

- | | |
|---|---|
| Under-mining prohibited | 406.—(1) In workings of clay, sand, gravel or other types of unconsolidated material, the method of removing material by undermining shall not be used. 1961-62, c. 81, s. 411 (1). |
| Height of working face | (2) Where mechanical equipment is not used, no working face in workings of clay, sand, gravel or other types of unconsolidated material shall have a vertical height of more than ten feet unless the material is at a suitable angle to ensure safety. 1961-62, c. 81, s. 411 (2), <i>amended</i> . |
| Terraces | (3) Where the thickness of the material exceeds ten feet in vertical depth, the work shall be done in terraces or at a suitable angle to ensure safety. |
| Use of mechanical equipment | (4) Where mechanical equipment is used in loading clay, sand, gravel or any other type of unconsolidated material, unless the material is at a suitable angle of repose, no working place shall have a vertical height of more than five feet above the top of the boom or the bottom of the bucket raised to its highest operating position. 1961-62, c. 81, s. 411 (3, 4). |
| Use of internal combustion engines | (5) No internal combustion engine shall be installed or operated in any pit or quarry unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate therein to a degree that is likely to endanger the safety of any person. <i>New</i> . |
| Height of face in consolidated material | 407. Unless permission in writing is first obtained from the chief engineer, all open-cut (cast) operations (workings) in consolidated material over sixty-five feet in depth shall be worked in benches not more than sixty-five feet high, and due precautions shall be taken to maintain the walls, benches and broken material in a safe working condition, and no working face shall be advanced by undercutting, except where a tunnelling method is used. 1961-62, c. 81, s. 412, <i>amended</i> . |

408. Every pit or quarry dangerous by reason of its depth shall be securely fenced or otherwise protected against inadvertent access. 1961-62, c. 81, s. 413. Fencing pits and quarries
- 409.—(1) In all open-pit workings, all unconsolidated materials, such as clay, earth, sand, gravel, and loose rock, lying within six feet of the rim of the pit or quarry, shall be removed. Stripping overburden
- (2) Beyond this strip, all overburden shall be sloped to an angle less than its natural angle of repose. 1961-62, c. 81, s. 414. Idem
- 410.—(1) When dumping material from a vehicle to a stockpile, appropriate precautions considering weather and other relevant conditions shall be taken to keep the vehicle at a safe distance from the edge. 1961-62, c. 81, s. 415. Precautions when stockpiling
- (2) Two exits shall be provided from a tunnel under a stockpile. *New.* Exits from tunnels under stockpiles
- 411.—(1) Unless the adjoining owners agree to dispense therewith, in sand, clay or gravel or other natural unconsolidated material, excavation operations shall not be carried on within a distance from the property boundary of half the height of the total pit face, and material that sloughs from within this distance shall not be removed. 1961-62, c. 81, s. 416 (1). Property boundaries, unconsolidated material
- (2) Unless the adjoining owners agree to dispense therewith, no quarrying operation shall be carried on in a rock quarry within a distance of fifteen feet from the property boundary. Idem, rock quarries
- (3) Subject to subsection 2, where there is overburden in a rock quarry, the natural slope of the overburden shall be allowed for from the property boundary in addition to the six feet required by subsection 1 of section 409. 1961-62, c. 81, s. 416 (2, 3), *amended.* Idem
- 412.—(1) No person shall be permitted to work near a pit or quarry wall until the wall has been examined by the supervisor in charge of the crew. Examination of wall
- (2) If the wall is found unsafe, the supervisor shall have all hazards removed before permitting any other work. 1961-62, c. 81, s. 417, *amended.* Idem
413. Derrick guy wires shall be regularly inspected and maintained. 1961-62, c. 81, s. 418. Inspection of derrick guy wires
- 414.—(1) Every person engaged in work on the wall of a pit or quarry at such operations as barring loose Safety belts and safety harnesses

material, scaling or cleaning, shall wear continuously a safety belt or safety harness.

- Snubbing, etc.  (2) The rope of such belt or harness shall be securely snubbed above the working place or the rope may be held taut by an adequate number of persons. 1961-62, c. 81, s. 419, *amended*. 
- Hoisting of persons prohibited 415. No person shall be lowered or raised or allow himself to be lowered or raised by means of a hoist or derrick at a pit or quarry unless permission is first obtained in writing from the chief engineer. 1961-62, c. 81, s. 420, *amended*.
- Signalman to clear area 416. Where a load is being hoisted or lowered by means of a hoist or derrick at a pit or quarry, a signalman, where required, shall notify all persons in the vicinity to retire to a place of safety until the load has cleared the danger zone. 1961-62, c. 81, s. 421, *amended*.
- Derail at top of incline 417.—(1) An effective block, automatic derail or safety switch shall be provided at the top of each inclined place at a pit or quarry to prevent cars from accidentally running down.
- Exception (2) Such installation, however, is not required where the skip or car remains attached to the hoisting rope. 1961-62, c. 81, s. 422, *amended*.
- Record of primary blasts 418. At all rock quarries and open pits, a record of each primary blast, signed by the person in charge of the blast, shall be kept and the following information recorded:
1. Date, time and location of the blast.
 2. Burden, spacing, depth and number of holes blasted.
 3. Weight of explosives or blasting agents, footage of top stemming and firing delay detonators used in respect of each hole.
 4. Weight of explosives or blasting agents used per estimated ton broken. 1961-62, c. 81, s. 423, *amended*.
- Hoisting signals 419. Unless the movement of a hoisting conveyance at a pit or quarry is visible to the hoistman at all times, a suitable signal system shall be installed and maintained, and suitable signals, approved by the district mining engineer, shall be used. 1961-62, c. 81, s. 424, *amended*.

- 420.—(1) At every pit or quarry, there shall be provided ^{Travelling ways} and maintained in good working condition a suitable travelling way leading from the working level of the pit or quarry to the surface. 1961-62, c. 81, s. 425 (1), *amended*.
- (2) Where the travelling way is inclined at more than ^{Where stairways or ladders mandatory} 30 degrees and less than 50 degrees to the horizontal, stairways or ladders shall be provided.
- (3) All stairways shall be equipped with substantial and ^{Hand-rails on stairways} suitably placed hand-rails. 1961-62, c. 81, s. 425 (2, 3).
- (4) Where the travelling way is inclined at more than ^{Where ladders mandatory} 50 degrees to the horizontal, ladders shall be provided. 1961-62, c. 81, s. 425 (4), *amended*.
- (5) Substantial platforms shall be built at intervals not ^{Platforms} exceeding twenty-one feet in the ladderway and at all places where the ladders are off-set.
- (6) Except for approved access ladders to equipment, ^{Maximum inclination of ladders} no ladder shall be installed at an inclination of more than 70 degrees to the horizontal. 1961-62, c. 81, s. 425 (5, 6).

STEAM, COMPRESSED AIR

- 421.—(1) Every steam boiler used for generating steam ^{Steam boilers} in or about a mine, whether separate or one of a range,
- (a) shall have attached to it a proper safety-valve, steam-gauge and water-gauge to show respectively the pressure of steam and the height of water in each boiler; and
- (b) shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer. 1961-62, c. 81, s. 452 (1), *amended*.
- (2) The certificate of inspection shall be kept posted in ^{Certificate to be posted} the boiler room at all times. 1961-62, c. 81, s. 452 (2).
422. Every such boiler, safety-valve, steam-gauge and ^{Maintenance} water-gauge shall be maintained in proper working condition. 1961-62, c. 81, s. 453.

Air receivers
and com-
pressors

423.—(1) Every air receiver installed at the surface of a mine and those installed with an air compressor underground shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer.

Certificate
to be
posted

(2) The certificate of inspection shall be kept posted in the compressor room at all times.

Examina-
tion and
mainten-
ance

(3) All intercoolers, aftercoolers, inlet and discharge valves on stationary compressors in operation shall be examined at least once in every twelve months and shall be cleaned when necessary. 1961-62, c. 81, s. 454 (1-3).

Temper-
ature-
indicating
device

(4) A temperature-indicating device shall be installed on the high pressure discharge of each compressor and the normal operating temperature of the compressor shall be indicated by a red mark on the scale of the device. 1961-62, c. 81, s. 454 (4, 5), *amended*.

Recording
of tem-
perature

(5) The temperature shall be observed at regular intervals during the shift and shall be recorded in the compressor log book.

Exception

(6) Subsections 3, 4 and 5 do not apply to,

(a) a compressor discharging to atmosphere;

(b) a compressor installation with a prime-mover having a Therm-hour rating of 1.145 or less;

(c) a compressor plant used for compressing air to a pressure of more than 15 pounds per square inch where the total Therm-hour rating of the prime-mover or movers is 1.908 or less; or

(d) a compressor where the cylinders are not lubricated with oil. 1961-62, c. 81, s. 454 (6, 7), *amended*.

Examina-
tion of air
receivers

(7) The air receivers mentioned in subsection 1 shall be examined at least once in every twelve months and shall be cleaned when necessary.

Record of
examina-
tions

(8) A book, available to the district engineer, shall be kept in which shall be recorded the date of every examination and cleaning under subsections 3 and 7 and a note shall be made as to the condition of the appliance examined or cleaned. 1961-62, c. 81, s. 454 (8, 9), *amended*.

PROVISIONS GOVERNING THE USE OF ELECTRICITY

424.—(1) In this section and in sections 425 to 563,
governing the use of electricity,

1. “accessible”, as applied to equipment, means ^{Interpre-} permitting close approach due to not being ^{tation} guarded by locked doors, elevation or other effective means;
2. “armoured cable” means a cable provided with an outer covering, fabricated from a metal other than lead, which forms an integral part of the assembly of the cable and is designed primarily to afford mechanical protection;
3. “authorized person” means,
 - i. a qualified person who, because of his duties or occupation, is delegated to approach or handle electrical equipment, or
 - ii. any other person who, having been warned of the hazards involved, has been instructed or authorized to approach or handle electrical equipment by some person having authority to give the instructions or authorization;
4. “branch circuit” means the part of a circuit that extends beyond the final over-current devices on the circuit;
5. “circuit” means a path through which electric current can flow;
6. “circuit-breaker” means an electro-mechanical device designed to open, under both overload and short-circuit conditions, a current-carrying circuit without injury to the device;
7. “conductor” means a body so constructed from conducting material that it may be used as a carrier of electric current;

8. "contactor" means a device, operated other than by hand, for repeatedly establishing and interrupting an electric power circuit;
9. "disconnecting means" means a device, group of devices or other means whereby the conductors of a circuit can be disconnected from their source of supply;
10. "electrical equipment" means any apparatus, appliance, device, instrument, fitting, fixture, machinery, material or thing used in or for, or capable of being used in or for, the generation, transformation, transmission, distribution, supply or utilization of electric power or energy, and, without restricting the generality of the foregoing, includes any assemblage or combination of materials or things which is used, or is capable of being used or adapted, to serve or perform any particular purpose or function when connected to an electrical installation, notwithstanding that any such materials or things may be mechanical, metallic or non-electric in origin;
11. "feeder" means a conductor, or group of conductors, which transmits electrical energy from a service supply, transformer, switch-board, distribution centre, generator or other source of supply to branch circuit overcurrent devices;
12. "ground" means a connection to earth obtained by a ground electrode;
13. "ground electrode" means a buried metallic water-piping system or metal object or device buried in or driven into the ground so as to make intimate contact therewith and to which a grounding conductor is electrically and mechanically connected;
14. "grounded" means connected effectively with the general mass of the earth through a grounding system having a current-carrying capacity sufficient at all times, under the most severe conditions that are liable to arise in practice, to prevent a current in the grounding conductor from causing a harmful voltage to exist,

- i. between the grounded conductors and neighbouring exposed conducting surfaces that are in good contact with the earth, or
 - ii. between the grounded conductors and neighbouring surfaces of the earth itself;
- 15. "grounding conductor" means a path of suitable metal specially arranged as a means whereby electrical equipment is electrically connected to a ground electrode;
- 16. "grounding system" means all conductors, clamps, ground clips, ground plates or pipes and ground electrodes by means of which the electrical installation is grounded;
- 17. "guarded" means covered, shielded, fenced, enclosed or otherwise protected by means of suitable covers, or casings, barriers, rails or screens, mats or platforms, to remove the likelihood of dangerous contact or approach by persons or objects;
- 18. "isolating means" means a device, group of devices or other means intended for isolating an electric circuit from its source of power and intended to be operated only after the circuit has been opened by some other means;
- 19. "mobile", as applied to electrical equipment, means the equipment is specifically designed not to be used in a fixed position;
- 20. "overcurrent device" means any device capable of automatically opening an electrical circuit both under pre-determined overload and short-circuit conditions either by fusing of metal or by electro-mechanical means;
- 21. "overload device" means a device affording protection from excess current but not necessarily short-circuit protection, and capable of automatically opening an electric circuit either by the fusing of metal or by electro-mechanical means;
- 22. "qualified person" means a person familiar with the construction and operation of electrical equipment and the hazards involved;

23. "switch" means a device for making, breaking or changing connections in a circuit, and
 - i. "general use switch" means a switch that is intended for use in general distribution and branch circuits, is rated in amperes and is capable of interrupting its rated current at rated voltage, and
 - ii. "motor circuit switch" means a switch, rated in horsepower, capable of interrupting the maximum operating overload current of a motor of the same horsepower at the rated voltage;
24. "switchboard" means a panel or assembly of panels on which are mounted any combination of switching, measuring, control and protective devices, buses and connections, designed with a view to successfully carrying and rupturing the maximum fault current encountered when controlling incoming and outgoing feeders;
25. "utilization equipment" means equipment, devices and connected wiring that utilize electrical energy for mechanical, chemical, lighting, testing or similar purposes and are not a part of the supply equipment, supply lines or communication lines;
26. "visible break", where applied to a disconnecting means, means a switch or device wherein the separation between all members of the movable and the fixed current-carrying parts may be readily determined by visual inspection;
27. "voltage" or "volts" means the highest effective difference of potential between the conductors of the circuit concerned;
28. "voltage to ground" means,
 - i. in grounded circuits, the highest effective difference of potential between any wire of the circuit and ground,
 - ii. in ungrounded circuits, the highest effective difference of potential existing in the circuit;

29. "wire gauge" means the standard known as A.W.G. (American Wire Gauge) or B. & S. (Brown and Sharpe) wire gauge. 1961-62, c. 81, s. 455.

- (2) Except where a contrary intent is provided, sections 425 to 563 apply to mines, on surface and under-^{Application of ss. 425-563} ground, and to plants. *New.*

GENERAL

425. In case of the abandonment of a mine or plant, the owner, agent or manager shall cause the station or stations supplying power to and being the property of the mine or plant to be disconnected from the power source and within fourteen days shall notify the chief engineer in writing that the disconnection has been made. 1961-62, c. 81, s. 456, *amended*.^{Disconnection when abandoned}
- 426.—(1) Electrical equipment shall be designed, installed and maintained in compliance with the requirements of this Part. 1961-62, c. 81, s. 457.^{Requirements to be observed}
- (2) The district electrical-mechanical engineer shall be notified of any proposed,^{Notification required}
- (a) major electrical installation;
 - (b) radio-frequency transmitter installation; or
 - (c) major extension to existing installations. *New.*
427. The edition that is current from time to time of the Canadian Electrical Code, Part I, shall be accepted as good practice in the installation of electrical equipment except where it conflicts with the provisions of this Part in which case the provisions of this Part prevail. 1961-62, c. 81, s. 458, *amended*.^{Accepted standard}
428. All electrical equipment shall be of such construction and so installed and maintained as to reduce fire hazard and injury to persons as far as is practicable. 1961-62, c. 81, s. 459, *amended*.^{Hazard free}
429. All electrical equipment shall be suitably identified where necessary for safety. 1961-62, c. 81, s. 460.^{Identification of equipment}
430. Electrical equipment shall show a plate bearing the maker's name and all other ratings, such as horsepower, voltage or current, necessary to prove its suitability. 1961-62, c. 81, s. 461.^{Nameplate required}

Competent
person in
charge

431.—(1) Where electrical apparatus is used at a mine or plant, it shall be in the charge of an authorized person who shall be qualified by experience to handle such apparatus. 1961-62, c. 81, s. 462 (1), *amended*.

Idem

(2) Every person operating or having charge of electrical apparatus shall have been instructed in his duty and shall be competent to perform the work that he is set to do.

Idem

(3) Repairs, extensions and changes to existing electrical installations shall be made only by qualified persons. 1961-62, c. 81, s. 462 (2, 3).

Temporary
installations

432. Temporary wiring and equipment that do not comply with this Part may be used in an emergency, but only when under competent supervision or protected by suitable barriers or warning signs while it or neighbouring wiring is alive and accessible to unauthorized persons, and such temporary installations are permissible only for the period of the emergency. 1961-62, c. 81, s. 463, *amended*.

Defective
equipment

433.—(1) Defective equipment shall be put in good order or permanently disconnected.

Defective
wiring

(2) Defective wiring shall be repaired or removed. 1961-62, c. 81, s. 464.

Repairs
or altera-
tions to
electrical
equipment

434.—(1) No repairs or alterations shall be carried out on live equipment except where complete disconnection of the equipment is not practicable.

Idem

(2) When repairs or alterations are being made, whether the equipment is alive or dead, all necessary precautions shall be taken to ensure that the work may be done safely.

Idem

(3) In places where explosive or highly flammable materials or gases are present, or in wet locations, repairs or alterations shall not be made on live equipment. 1961-62, c. 81, s. 465, *amended*.

Locking or
tagging
switches

435.—(1) All switches controlling apparatus shall be locked or plainly tagged in the open position to prevent the inadvertent closing thereof while work is being done on the apparatus.

Idem

(2) Notices placed on electrical equipment shall be of non-conducting materials. 1961-62, c. 81, s. 466.

436.—(1) Where installed electrical apparatus presents a fire hazard, each room or space shall be provided with an adequate approved fire-extinguishing appliance, conveniently located and conspicuously marked. ^{Fire-extinguishing appliances}

(2) Any fire-extinguishing appliance that has not been approved for use on live parts shall not be placed in a room containing electrical apparatus or exposed lines unless a sign is mounted at the appliance warning against its use on electrical fires. 1961-62, c. 81, s. 467. ^{Idem}

GROUNDING

437. Grounding conductors shall have adequate protection where exposed to mechanical injury. 1961-62, c. 81, s. 468. ^{Protection from mechanical injury}

438.—(1) One conductor of all circuits not over 150 volts shall be grounded if exposed to leakage from higher voltage circuits either through overhead construction or through transformers having a primary voltage exceeding 750 volts, except where such circuits form part of a control circuit or signalling system the grounding of which would affect the reliability of service. ^{Circuits to be grounded}

(2) Three-wire single-phase circuits not exceeding 300 volts between outer conductors shall have the neutral grounded. ^{Idem}

(3) One conductor of the secondary circuits of all instrument transformers shall be grounded unless the circuits are installed and guarded as required for the high-voltage circuits of the transformers. 1961-62, c. 81, s. 469. ^{Idem}

439.—(1) For grounding a.c. circuits, the grounding conductors shall have adequate current-carrying capacity and shall be not less than No. 8, A.W.G. ^{Size of circuit grounding conductor}

(2) The grounding conductor for secondary circuits of instrument transformers shall not be smaller than the conductors of the secondary circuit. 1961-62, c. 81, s. 470. ^{Idem}

440.—(1) The exposed non-current-carrying metal parts of all electrical equipment shall be grounded when practicable, ^{Equipment to be grounded}

(a) for all equipment over 150 volts; and

- (b) for all equipment under 150 volts where the exposed non-current-carrying metal parts are within reach of exposed grounded surfaces, such as metal frames of other machines, plumbing fixtures, conducting floors or walls.

Idem

- (2) Grounded surfaces within five feet horizontally of the parts considered or within eight feet vertically of the floor shall be considered within reach. 1961-62, c. 81, s. 471.

Size of equipment grounding conductor

- 441.—(1) The minimum size of grounding conductor for raceways and fixed equipment shall be not less than that provided by a copper conductor of a size indicated in the following table:

MINIMUM SIZE OF GROUNDING CONDUCTOR
FOR RACEWAYS AND EQUIPMENT

Rating or Setting of Automatic Overcurrent Device in Circuit Ahead of Equipment, Conduit, etc., Not exceeding—Amperes	Size of Grounding Conductor			
	Copper Wire AWG	Alum. Wire AWG	Conduit or Pipe Inch	Electrical Metallic Tubing Inch
20	16*	14*	1/2	1/2
30	14	12	1/2	1/2
40	12	10	1/2	1/2
60	10	8	1/2	1/2
100	8	6	1/2	1/2
200	6	4	1/2	1
400	4	2	3/4	1 1/4
600	2	0	3/4	1 1/4
800	0	00	1	2
1000	00	000	1	2
1200	000	0000	1	2

*Permissible only when part of an approved cable assembly.

Idem

- (2) Where the grounding conductor is run outside the cable armour or conduit enclosing the associated circuit conductors, the minimum size of such a grounding conductor shall be No. 8, A.W.G. 1961-62, c. 81, s. 472.

Grounding conductor size for portable equipment

442. Flexible cord used to supply portable equipment having a rating of fifteen amperes or less at voltages not exceeding 250 volts shall have included in the cord assembly a grounding conductor whose size shall be,

- (a) not smaller than No. 16, A.W.G. if uninsulated, or No. 18, A.W.G. if insulated; and

- (b) at least the same size as the current-carrying conductors, except that, in cords of No. 12, A.W.G. and larger, it may be two A.W.G. sizes smaller than the other conductors. 1961-62, c. 81, s. 473.
443. The grounding conductor, bond or bonding jumper shall be attached to circuits, conduits, cabinets, equipment and the like, which are to be grounded, by means of suitable lugs, pressure connectors, clamps or other approved means. 1961-62, c. 81, s. 474. Means of attachment to circuits and equipment
444. The grounding conductor shall be of copper or other metal that will not corrode excessively under the existing conditions. 1961-62, c. 81, s. 475. Material for grounding conductors
- 445.—(1) Ground connections to metallic water or air systems shall be made beyond any point liable to disconnection. Piping system used as ground
- (2) Main water or air lines shall be substantially bonded together for this purpose, but shall, unless connected to a buried piping system of considerable extent that will provide a low-resistance ground, be connected to an artificial ground electrode. 1961-62, c. 81, s. 476. Idem
446. The grounding conductor shall be connected to the grounding electrode by means of a substantial ground clamp or other equivalent means. 1961-62, c. 81, s. 477. Means of attachment to ground electrode
- 447.—(1) Artificial ground electrodes shall consist of driven pipes, rods, buried plates or other devices acceptable for the purpose. Artificial electrodes
- (2) Electrodes of iron or steel pipe shall be not less than $\frac{3}{4}$ -inch internal diameter and shall be galvanized. Idem
- (3) Rod electrodes shall be not less than $\frac{5}{8}$ -inch in diameter if of iron or steel or $\frac{1}{2}$ -inch in diameter if of non-ferrous metal. 1961-62, c. 81, s. 478. Idem
448. The grounding system shall be connected to the body of the earth, on the surface, through an earth-contact resistance acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 479, *amended*. Resistance of electrodes

Resistance
measure-
ment

449. The earth-contact of the main grounding system and supplementary earth-contacts shall be provided with means to facilitate measurement of earth-contact resistances. 1961-62, c. 81, s. 480.

WIRING METHODS

Types of
conductors

450. Conductors shall be suitable for the location, use and voltage of the circuit and shall have sufficient current-carrying capacity for the current they are required to carry. 1961-62, c. 81, s. 481.

Portable
power
conductors

451. Portable conductors supplying mobile equipment operating at more than 300 volts shall conform with the following specifications:

1. The cable shall have a voltage rating not less than 50 per cent higher than the normal operating voltage of the circuit.
2. Cable of standard rating for the normal operating voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,
 - i. limit ground fault current, and
 - ii. limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,

and where ground fault protection is provided.

3. All conductors including grounding conductors shall be contained in one flexible, jacketed cable assembly.
4. Where the cable contains both the power circuit and its remote control circuit, each circuit conductor shall be insulated, as required by paragraphs 1 and 2, for the highest potential employed in the cable, except that, where sheathing, as in paragraph 10, is provided, the control conductors need only be insulated for their normal operating voltage.
5. The minimum size of the power conductors shall be No. 12, A.W.G.

6. The cable shall contain as many grounding conductors as power conductors and the grounding conductors shall be located in the outer interstices between the power conductors.
 7. Remote control conductors contained in the cable need not be considered power conductors in determining the number of grounding conductors.
 8. The grounding conductors contained in the cable shall be uninsulated and shall have a total conductance of not less than 60 per cent of the largest power conductor.
 9. The minimum size of each grounding conductor shall be not less than No. 12, A.W.G.
 10. Cables on circuits operating over 750 volts shall have a grounded sheathing, consisting of tinned copper wire mesh, or the equivalent, around each power conductor, and this sheathing shall be, throughout the length of the cable, in contact with the interstitial grounding conductors.
 11. Where connectors are used to attach cables to mobile equipment, the cable shall be secured in such a manner as to prevent mechanical damage.
 12. Portable cable used to supply equipment in underground workings shall have an outer jacket of a material that will not support combustion and shall be continuously identified as having such a jacket. 1961-62, c. 81, s. 482, *amended*.
- 452.—(1) All exposed current-carrying parts of electrical equipment, such as bus-bars, conductors and terminals, operating at over 150 volts, shall be, ^{Guarding of live parts}
- (a) armoured;
 - (b) enclosed in a suitable raceway; or
 - (c) isolated by elevation or guarded. 1961-62, c. 81, s. 483.
- (2) Except in cases of emergency, open wiring shall not ^{Open wiring} be used. 1961-62, c. 81, s. 578.

A.C. circuits
in raceways

453. All conductors of an a.c. circuit shall be contained in the same raceway. 1961-62, c. 81, s. 484.

Conductors
of different
systems in
raceways or
armouring

454. Where conductors of different systems are installed in the same raceway or armouring, each conductor shall be insulated for the highest potential employed or, in the case of a raceway, separated by a suitable barrier. 1961-62, c. 81, s. 485.

Conductors
of different
systems in
enclosures

455. Conductors of different systems shall not be installed in the same box, cabinet or auxiliary gutter unless effectively separated by barriers. 1961-62, c. 81, s. 486.

Barriers

456. Identifying barriers shall be provided between circuits where more than one set of single-pole, blade-type isolating switches are installed adjacent to each other. 1961-62, c. 81, s. 487, *amended*.

Connections
to
apparatus

457. Metal-covered and insulated conductors in conduit, where joined to transformers, motors, switchgear and other apparatus, shall have their metal coverings secured to such apparatus by clamps, locknuts or other devices to protect the insulated conductors from mechanical injury. 1961-62, c. 81, s. 488.

PROTECTION AND CONTROL

Type and
rating of
protective
and control
devices
Idem

458.—(1) The type and rating of protective and control devices shall be suitable for their use.

(2) All protective and control devices installed outdoors shall be of a design suitable for their location. 1961-62, c. 81, s. 489.

Overcurrent
devices
required

459.—(1) Each ungrounded conductor shall be protected by an overcurrent device at the point where it receives its supply of current and at each point where the size of the conductor is decreased, except that such protection may be omitted,

(a) where the branch circuit is not more than twenty-five feet in length;

(b) where the protection for a larger conductor adequately protects a smaller; and

(c) where the opening of the circuit may cause special hazard by the interruption of service or removal of protection.

- (2) The rating or setting of the protective device shall ^{Idem} not exceed the allowable current-carrying capacity of the circuit conductors except in the case of branch motor circuits where the rating or setting of the device may be increased sufficiently to take care of motor-starting currents.
- (3) Unless the opening of the device disconnects all ^{Idem} circuit conductors at the same time, no manually-operated or automatically-operated disconnecting device shall be placed in a neutral or grounded conductor. 1961-62, c. 81, s. 490.
460. Overcurrent devices shall be enclosed in cut-out ^{Enclosure of overcurrent devices} boxes or cabinets unless they form a part of an approved assembly that affords equivalent protection or unless mounted on switchboards, panel-boards, or controllers located in rooms or enclosures free from easily ignitable material and dampness, and accessible only to authorized persons. 1961-62, c. 81, s. 491.
- 461.—(1) Suitable control devices shall be inserted in all ^{Control devices, general} feeders and branch circuits.
- (2) All control devices shall be readily and safely accessible ^{Idem} to authorized persons and shall be so located, labelled or marked as to afford means of identifying circuits or equipment supplied through them and shall indicate whether they are open or closed. 1961-62, c. 81, s. 492.
- 462.—(1) Control devices shall have ratings suitable for ^{Rating of control devices} the connected load of the circuits they control and, with the exception of isolating switches, shall be capable of interrupting such loads.
- (2) Control devices shall be grouped where practicable. ^{Grouping of control devices}
- (3) All control devices shall be so arranged that the ^{Location of control devices} operating mechanisms are readily accessible to the operator. 1961-62, c. 81, s. 493.
- 463.—(1) Control devices, unless they are located or guarded so as to render them inaccessible to un- ^{Enclosure of control devices} authorized persons and to prevent fire hazards, shall have all current-carrying parts in enclosures of metal or other fire-resisting material.
- (2) Manually-operable control devices shall be so con- ^{Idem} structed that they may be switched to the "off" position without exposing live parts.

- Idem (3) Manually-operable control devices shall clearly indicate the "on" and "off" positions. 1961-62, c. 81, s. 494.
- Connection of control devices 464. Control devices shall, if practicable, be so connected that the blades or moving contacts will be dead when the device is in the open position. 1961-62, c. 81, s. 495.
- Control devices ahead of overcurrent devices 465. Control devices used in combination with overcurrent devices or overload devices for the control of circuits or apparatus shall be connected so that the overcurrent or overload devices will be dead when the control device is in the open position. 1961-62, c. 81, s. 496.
- Visible break requirement 466.—(1) Disconnecting means of the visible-break type shall be installed on all circuits operating at over 300 volts to ground and shall be as near as is practicable to the point of supply.
- Idem (2) Unless a control device on circuits over 300 volts makes a visible break, there shall be installed between the control device and its point of supply a suitable disconnecting switch. 1961-62, c. 81, s. 497.
- Ground fault detector requirement 467.—(1) On each ungrounded utilization system over 300 volts, at least one suitable device shall be installed and maintained for the purpose of indicating ground faults.
- Idem (2) Such device shall be provided with,
 (a) short-circuit protection; and
 (b) disconnecting means. 1961-62, c. 81, s. 498 (1, 2).
- Idem (3) When a ground fault is indicated, it shall be located and removed as soon as is practicable. 1961-62, c. 81, s. 498 (4).
- Illumination of equipment 468. Adequate illumination shall be provided to allow for proper operation of electrical equipment. 1961-62, c. 81, s. 499.
- Emergency illumination of equipment 469. Where electrical equipment requires an attendant, there shall be provided a separate emergency source of illumination from an independent generator, storage battery or other suitable source. 1961-62, c. 81, s. 500.

INSTALLATION OF EQUIPMENT

470. Adequate clear working space with secure footing shall be provided about all electrical equipment. ^{Working space}
1961-62, c. 81, s. 501.

TRANSFORMERS

471. Transformers shall be of a type and design suitable ^{General} for the location in which they are to be installed.
1961-62, c. 81, s. 502.
472. Each transformer shall be provided with a name-plate bearing the following markings: ^{Nameplate required for transformers}
1. Maker's name.
 2. Rating in kva.
 3. Rated full load temperature rise.
 4. Primary and secondary voltage ratings.
 5. Frequency in cycles per second.
 6. Liquid capacity, if of the liquid-filled type.
 7. Type of liquid to be used, if it is to be filled with an approved liquid that will not burn in air. 1961-62, c. 81, s. 503.
 8. Percentage impedance voltage, if of the power or distribution type. *New.*
473. Transformers having a voltage rating in excess of 750 volts and all transformers having exposed terminals, including their conductors and control and protective devices, shall be accessible only to authorized persons and, unless isolated by elevation, they shall be surrounded by an enclosure that, if of metal, shall be grounded, and suitable warning signs indicating the highest potential employed shall be conspicuously posted. 1961-62, c. 81, s. 504. ^{Isolation and guarding of transformers}
- 474.—(1) Dry-core type transformers with Class A insulation, if installed within a building not of fire-resistive construction, shall be in a fire-resistive enclosure. ^{Special transformers}
- (2) Transformers containing an approved liquid that will not burn in air and transformers of the dry-core type with Class B or Class C insulation may be installed within or attached to the wall of a building not of fire-resistive construction, if they are surrounded by a suitable enclosure to prevent mechanical injury and access by unauthorized persons. ^{Idem}
1961-62, c. 81, s. 505.

Liquid-
filled trans-
formers

475.—(1) Oil-filled transformers installed outdoors shall be located not less than fifty feet distant from the shafthouse or any combustible building attached thereto, and means shall be provided to contain escaping oil or to direct the flow away from such buildings.

Idem

(2) Oil-filled transformers shall not be mounted on or above combustible roofs and, if attached to the exterior of a building other than a transformer-house, shall be placed only against non-combustible walls and away from all openings.

Idem

(3) Transformer buildings containing oil-filled transformers, if not entirely of fire-resistive construction, shall be located at least fifty feet distant from any other combustible building.

Idem

(4) Oil-filled transformers, if within a building other than a transformer-house, shall be in a vault.

Idem

(5) Transformers having their cores immersed in a liquid that will not burn in air may be installed without a vault if,

(a) the transformer is protected from mechanical damage either by location or guarding;

(b) a pressure relief vent is provided where the rating exceeds 25 kva at 25 cycles or $37\frac{1}{2}$ kva at 60 cycles; and

(c) a means of absorbing gases generated by arcing inside the case, or a pressure relief vent connected to outdoors, is provided where the transformer is installed in a poorly-ventilated section. 1961-62, c. 81, s. 506.

Instrument
trans-
formers

476.—(1) When primaries are above 750 volts, secondary circuits of current and potential transformers, unless otherwise adequately protected from injury or contact with persons, shall be in permanently-grounded conduit or armour.

Idem

(2) Secondary circuits of current transformers shall be provided with means for short-circuiting them that can be readily connected while the primary is energized and that are so arranged as to permit the removal of any instrument or other device from the circuits without opening the circuits. 1961-62, c. 81, s. 507.

477. Each transformer or each bank of transformers operating as a unit shall have overcurrent protection. ^{Overcurrent protection for transformers} 1961-62, c. 81, s. 508.

478.—(1) Control and protective devices, complying with one of the following, shall be installed for all power and distribution transformers: ^{Control and protection requirements}

(a) Circuit-breakers of adequate interrupting capacity and rating.

(b) Fuses of adequate rating and interrupting capacity preceded by suitable group-operated visible-break load-interrupting devices capable of making and interrupting their full load rating and that may be closed with safety to the operator with a fault on the system.

(c) Fuses of adequate rating and interrupting capacity preceded by a group-operated visible-break air-break switch capable of interrupting the magnetizing current of the transformer installation and that may be closed with safety to the operator with a fault on the system and so interlocked with the transformer secondary load interrupters as to prevent its operation under load.

(2) Where the transformer rating does not exceed 100 ^{Idem} kva per phase and the potential between phases does not exceed 7,500 volts, a single-pole disconnecting fuse of adequate interrupting capacity may be used on the primary. 1961-62, c. 81, s. 509.

SWITCHBOARDS AND SWITCHGEAR

479. Panels of switchboards shall be of incombustible material and shall be substantially supported on a metal framework. ^{General} 1961-62, c. 81, s. 510.

480. Adequate illumination shall be provided for reading instruments and other operations. ^{Illumination of switchboards} 1961-62, c. 81, s. 511.

481. Switchgear, if not of the dead-front or enclosed type, and live parts on the rear of dead-front switchboards shall be inaccessible to unauthorized persons. ^{Location of switchgear} 1961-62, c. 81, s. 512.

Clearance
back of
switchboard

482.—(1) There shall be a space of not less than three feet between equipment on the back of a fixed switchboard and the nearest adjacent wall when such equipment is less than seven feet from the floor.

Ingress and
egress

(2) Ready means for ingress and egress to the space behind the switchboard shall be provided.

Doors, etc.

(3) Doors or gates of suitable material may be provided at such points for guarding-purposes but they shall be capable of being readily opened from the inside without the use of a key or tool.

Space to be
kept clear

(4) The space behind the switchboard shall be kept clear of foreign material and shall not be used for storage purposes. 1961-62, c. 81, s. 513.

TRANSMISSION LINES

General

483. All electrical supply lines and equipment shall be of suitable design and construction for the service and the conditions under which they are to be operated, and all lines shall be so installed and maintained as to reduce fire hazard and injury to persons as far as is practicable. 1961-62, c. 81, s. 514.

Isolation
and
guarding

484. Conductors and other current-carrying parts of supply lines shall be so arranged as to provide adequate clearance from the ground or other space generally accessible or shall be provided with guards so as to isolate them effectively from accidental contact of persons. 1961-62, c. 81, s. 515.

Entrance to
buildings

485. Where conductors over 300 volts are attached to any building for entrance, they shall be isolated by elevation or guarded. 1961-62, c. 81, s. 516.

Clearance
over
railways

486.—(1) Supply lines carried over railways operated by steam, electric or other motive power and on which standard equipment, such as freight cars, is used, shall have the style of construction and the clearances overhead as called for in the Uniform Code of Operating Rules prescribed by the Transport Commissioners for Canada.

Idem

(2) Supply lines crossing over railways on which standard equipment is not used and lines crossing over roadways shall have ample clearance for the operating conditions and shall be substantially supported. 1961-62, c. 81, s. 517. *Amended.*

STORAGE BATTERIES

487. Storage batteries shall be kept in inaccessible battery rooms or enclosures used for no other purpose where, ^{Location of storage batteries}
- (a) the aggregate capacity at the eight-hour discharge rate exceeds five kilowatt hours; and
 - (b) the batteries are in open jars or tanks. 1961-62, c. 81, s. 518.
- 488.—(1) Storage battery rooms shall be thoroughly ventilated. ^{Ventilation of battery rooms}
- (2) Adequate means shall be provided for sufficient diffusion and ventilation of the gases from the battery to prevent the accumulation of an explosive mixture. 1961-62, c. 81, s. 519. ^{Idem}

LIGHTNING ARRESTERS

489. Where lightning arresters are installed in a building, they shall be located well away from all equipment, other than that which they protect, and from passageways and combustible parts of buildings. 1961-62, c. 81, s. 520. ^{Indoor installation of lightning arresters}
490. Lightning arresters installed for the protection of utilization equipment, ^{Location of lightning arresters}
- (a) may be installed either inside or outside the building or enclosure containing the equipment to be protected; and
 - (b) shall be isolated by elevation or guarded. 1961-62, c. 81, s. 521.
- 491.—(1) All non-current-carrying parts of lightning arresters shall be grounded, unless effectively isolated by elevation or guarded as required for live parts of the voltage of the circuit to which the arrester is connected. ^{Grounding}
- (2) Grounding conductors for lightning arresters on power transmission systems shall be run as directly as possible and be of low resistance and ample capacity. ^{Idem}
 - (3) In no case shall such grounding conductors be less than No. 6 copper wire, nor shall such grounding conductors pass through metal conduits unless electrically connected to both ends of the conduits. 1961-62, c. 81, s. 522. ^{Idem}

MOTORS

Control
required

492. All motors shall be provided with approved starting and control equipment. 1961-62, c. 81, s. 523, *amended*.

Interlocking
motor
circuits

493. Where it is desired to interlock one motor control circuit with a second motor controller,

(a) the supply or control conductors of one motor branch circuit shall not be run through or connected into the enclosure of a second motor controller unless such conductor or conductors are opened and de-energized by the disconnecting means of the second motor branch circuit; or

(b) a suitable relay may be interposed between the two controllers and located externally to both controllers. *New*.

Visible-
break
requirement

494. In all cases, the motor-circuit switch, general-use switch or isolating switch shall be of the visible-break type. 1961-62, c. 81, s. 525.

Discon-
necting
means
required

495. Every motor and its starting and control equipment shall be provided with a disconnecting means which will open all ungrounded conductors to the motor and which conforms to one of the following:

1. An approved attachment plug and receptacle may serve as disconnecting means for a portable motor.
2. An isolating switch or a general use switch may be used as a disconnecting means for motors of more than 50 horsepower.
3. In all other cases the disconnecting means shall consist of a motor circuit switch, a circuit breaker, or equivalent approved device capable of safely establishing and interrupting the stalled rotor current of the motor. *New*.

Rating of
discon-
necting
means

496. The disconnecting means shall have a rating not less than the following:

1. A motor circuit switch for a single motor shall have a horsepower rating, not less than that of the motor it serves.

2. A circuit breaker or isolating switch for a single motor shall have a current rating not less than 115 per cent of the full load current rating of the motor it serves.
3. A fused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required to accommodate the proper size of fuse.
4. An unfused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required if a fused switch were used.
5. A disconnecting means serving a group of motors on a single circuit shall have,
 - i. a horsepower rating not less than that of the largest motor in the group, if a motor circuit switch is used, and
 - ii. a current rating not less than 115 per cent of the full load current rating of the largest motor in the group plus the sum of the full load current ratings of all the other motors in the group which may be in operation at the same time.

New.

497. Motors shall be disconnected from the source of supply in case of low voltage by one of the following means unless it is evident that no hazard will be incurred through the lack of such disconnection:

Under-voltage protection required

1. Where automatic restarting is liable to create a hazard, the motor control device shall provide low-voltage protection.
2. Where it is necessary or desirable that a motor stop on failure or reduction of voltage and automatically restart on return of voltage, the motor control device shall provide low-voltage release. 1961-62, c. 81, s. 528, *amended*.

498. Each motor shall be suitably protected against continuous overload.

Overload protection required

CRANES, SHOVELS AND OTHER SIMILAR MACHINERY

Guarding
and
isolation

499.—(1) Crane collector wires shall be isolated by elevation and, where necessary, guarded.

Discon-
necting
means

(2) Suitable means that will disconnect all ungrounded conductors of the circuit supplying a crane, as defined in subsection 1 of section 249, shall be,

(a) provided within sight of the main contact conductors or within sight of the equipment if there are no main contact conductors; and

(b) accessible and operable from the ground or the floor over which the equipment operates;



(c) a circuit breaker or switch, capable of interrupting the circuit under heavy loads, shall be installed in the cab unless the current collector can be safely removed, under heavy loads, from the crane collector wires. 1961-62, c. 81, s. 530, *amended*.

Switch
required
in cab

(3) A circuit-breaker or switch, capable of interrupting the circuit under heavy loads, shall be used unless the current collector can be safely removed, under heavy loads, from the crane collector wires. 1961-62, c. 81, s. 531.

Protection
from
overhead
lines

500. Where it is necessary to operate shovels or other similar machinery having a mast or movable boom near exposed electrical conductors, a clearance equal to not less than one-half the maximum horizontal reach of the machine shall be maintained unless,

(a) the conductors are disconnected from the electrical supply and permission to work on the conductors has been authorized; or

(b) the conductors are first given adequate mechanical protection by the electrical authority involved, to prevent contact by the machine, its attachments or load; or



(c) the work involves the conductors and is being carried out by a qualified person using a machine with an insulated boom designed, built and tested for use on electrical potentials at least as high as that of the conductors involved; or



(d) special permission has been obtained from the district electrical-mechanical engineer and under such conditions and precautions as he may require. *New*.

TROLLEY WIRES

501. Trolley lines shall be isolated by elevation and, where necessary, guarded. 1961-62, c. 81, s. 532. Guarding and isolation
502. In underground workings, trolley lines shall, Requirements for trolley lines underground
- (a) be isolated by an elevation of not less than six feet;
 - (b) operate at a potential not exceeding 300 volts to ground;
 - (c) be effectively guarded. 1961-62, c. 81, s. 533.

LIGHTING

503. The operating voltage of a lighting circuit shall not exceed 300 volts and the voltage to ground of a conductor shall not exceed 150 volts, but this section does not apply in the case of electric locomotives and cranes using direct current. 1961-62, c. 81, s. 534. Maximum operating voltage
504. The neutral conductor on lighting circuits shall be identified by a white braid covering or other equivalent means. 1961-62, c. 81, s. 535. Neutral identification
505. Portable lamps shall have their sockets enclosed in suitably-insulated handles through which the conductors shall be carried and shall have a protective cage that encloses the lamp. 1961-62, c. 81, s. 536. Portable hand lamps

WIRING IN EXPLOSIVES AND BLASTING AGENTS STORAGE

506. All electrical wiring in explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses, shall be installed in rigid conduit with screwed water-tight joints or shall be armoured, moisture-proof cable. 1961-62, c. 81, s. 537. General
507. All conduit, armour, fittings and fixtures shall be permanently grounded. 1961-62, c. 81, s. 538. Grounding
508. The switches and fuses for lighting, heating or telephone circuits for explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings and cap and fuse houses shall be in a fire-resistive cabinet located outside the compartment in which explosives, blasting agents, fuses or detonators, or blasting caps, are stored. 1961-62, c. 81, s. 539. Location of control and protection

Type of
lighting
fixtures
required

509. Lighting fixtures shall be of an approved dust-tight type. 1961-62, c. 81, s. 540.

Overcurrent
protection
for lighting
circuits

510. Lighting circuits shall be protected by fuses or manual reset overcurrent devices rated at not more than 10 amperes. 1961-62, c. 81, s. 541, *amended*.

Lightning
protection

511. Circuits supplying power to explosives or blasting agents storages shall be protected against lightning surges. 1961-62, c. 81, s. 542.

Type of
heating
required

512. Heating systems for explosives or blasting agent storages or cap and fuse houses shall be of a type acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 543, *amended*.

Radiators
to be
grounded

513. Where a liquid is the medium used for distribution of heat for an explosive or blasting agent storage or a cap and fuse house the radiators shall be grounded. 1961-62, c. 81, s. 544, *amended*.

Fusing of
heater
circuits

514. Heater circuits shall be fused at not more than 125 per cent of normal current. 1961-62, c. 81, s. 545.

ELECTRIC BLASTING DEVICES

Construc-
tion

515. The firing device used for firing charges with electricity in accordance with subsection 7 of section 310 shall be so arranged that,

- (a) the switch mechanism will automatically return by gravity to the open position;
- (b) the live side of such device is installed in a fixed locked box and shall be accessible only to the authorized blaster;
- (c) provision is made that the leads to the face are short-circuited when the contacts of the electric blasting device are in the open position;
- (d) the box in which the electric blasting device and the short-circuiting device are mounted is provided with a lock and the door is so arranged that it cannot be closed or locked unless the contacts of the electric blasting device are open and the short-circuiting device is in place;
- (e) where electricity from 550-volt circuits is used for blasting, the device shall be electromagnetically operated, except as provided in subsection 3 of section 310.

516. When blasting cables or wires are installed in the vicinity of power or lighting cables, proper precautions shall be taken to prevent the blasting cables or wires coming in contact with the lighting or power cables. 1961-62, c. 81, s. 547.

Precautions
re installa-
tion of
blasting
cables

517. Circuits used for blasting from any source other than hand-held portable blasting devices shall be from an isolated, ungrounded power source and shall be used for blasting only. 1961-62, c. 81, s. 548, *amended*.

Isolated,
ungrounded
power
source

ELECTRIC HOISTS

518. Sections 519 to 544 apply to all electric hoists regardless of the method of operation. 1961-62, c. 81, s. 549.

General

519.—(1) For each electric hoist, protective devices shall be provided, which, in conjunction with the mechanical braking system, shall be capable of bringing a conveyance or counterbalance safely to rest under all conditions of authorized loading, direction of travel and speed without assistance from the drive.

Braking

(2) Where supplementary electrical braking is employed, at least the same degree of safety shall be supplied. 1961-62, c. 81, s. 550.

Idem

520. Except where otherwise specified, current-carrying parts of any safety device shall be so designed, installed and maintained that the failure of any such part will initiate emergency braking action to bring the hoist safely to rest. 1961-62, c. 81, s. 551.

Safety
requirement

521. Devices shall be installed in each hoisting compartment that, in the event of an overwound conveyance or counterbalance, shall be operated directly by the conveyance or counterbalance to initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage. 1961-62, c. 81, s. 552.

Track limits
required
for
overwind
protection

522. Devices shall be installed for each hoisting compartment that, in the event of an underwound conveyance or counterbalance, shall initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 553.

Underwind
protection
required

Overwind
and
underwind
require-
ments for
high-speed
hoists

523. Devices, driven from the operating drum or drums, shall be installed, where the hoist operates at a rope speed of 750 feet per minute or greater, that, in the event of an overwound or underwound conveyance or counterbalance, will initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments meet any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 554.

Overspeed

524. Each electric hoist shall have installed a device that will initiate an emergency stop and bring the conveyance or counterbalance to rest safely should the rope speed exceed the authorized maximum by a predetermined amount. 1961-62, c. 81, s. 555.

Enforced
slowdown

525. Devices, driven from the operating drum or drums, shall be installed where the hoist operates at a rope speed of 750 feet per minute or greater, that will enforce any necessary reduction in speed as the conveyance approaches the end of travel. 1961-62, c. 81, s. 556.

Adjustment
of protec-
tive devices


526. No person shall alter the adjustment of any protective device without proper authority. 1961-62, c. 81, s. 557.

Inter-
mediate
obstructions

527.—(1) Where ore or waste dumps, loading boxes or spill-doors are installed in a shaft or winze at points other than the upper and lower limits of normal travel of a conveyance and where any part of such dump box or door interferes with the free passage of a conveyance, there shall be installed,



(a) travel-limiting devices;

(b) travel-limiting devices as applicable to section 523, where required; 

(c) enforced slow-down devices as required by section 525, where applicable; and

(d) positive locking devices for maintaining such obstructions out of the operating position in the shaft or winze.

Idem

(2) The manager, or his agent, of a mine employing such an intermediate obstruction shall provide a procedure to be followed to ensure the safe operation of the installation.

- (3) Before such an installation is made, plans and procedure shall be submitted to the chief engineer for approval. 1961-62, c. 81, s. 558. ^{Idem}
528. Emergency braking action shall be initiated to bring a conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage in the event of, ^{Protection required for hoist electrical system}
- (a) the failure of the power supply to the hoist electric system;
 - (b) an overload on the hoist-drive motors of a magnitude and duration exceeding what would be considered an operating overload; or
 - (c) a short-circuit on the hoist electric system. 1961-62, c. 81, s. 559.
- 529.—(1) Every electric hoist shall have installed a device to enable a conveyance or counterbalance to be removed from an overwound or underwound position. ^{Backout}
- (2) Every such device shall be manually operable only. 1961-62, c. 81, s. 560. ^{Idem}
- (3) Every such device shall be so designed and installed that the brake or brakes holding a conveyance or counterbalance, when in an overwound or underwound position, cannot be released until sufficient drive motor torque has been developed to ensure movement of the conveyance or counterbalance in the correct direction only. *New.* ^{Backout switch, motor-torque-brake interlock}
530. A manually-operable switch shall be installed for each electric hoist within reach of the manual controls that will, when operated, initiate emergency braking action to bring the conveyance or counterbalance safely to rest. 1961-62, c. 81, s. 561. ^{Emergency switch}
531. An underwind by-pass switch may be installed, where necessary, that will allow the conveyance to be lowered through the underwind position if it is held in the closed position by the hoistman and will return automatically to the open position when not so held. 1961-62, c. 81, s. 562. ^{Underwind by-pass switch}
532. Each electric hoist shall have installed, within plain view of the manual controls, a meter that will indicate, at all times, the hoist motor load. 1961-62, c. 81, s. 563. ^{Load meter required}

Man-safety
require-
ments

533.—(1) Where men are transported in skips or the skips of skip-cage assemblies, there shall be installed a device that will prevent the conveyance, carrying the men, from entering the dumping position.

Idem

(2) Except in shaft sinking, such device shall be so installed that, when it is put into operation, a distinctive signal will be given, automatically, to men about to enter the conveyance.

Idem

(3) Such device is not required on electric hoists where men are hoisted for shaft inspection or maintenance operations only.

Idem

(4) Such device shall be put into operation, either manually or automatically, when men are transported.

Idem

(5) In those cases where the device is automatically put into operation by the hoistman's return of the 3-bell signal, the circuit shall be so arranged that the failure of the relay coils will not render the device inoperative. 1961-62, c. 81, s. 564.

Approach
warning
signal

534. Each electric hoist shall have installed a device whereby the hoistman is warned, audibly, that a conveyance or counterbalance is about to enter the region where a reduction in speed is necessary for safe manual braking. 1961-62, c. 81, s. 565.

Automatic
hoists

535. Sections 536 to 544 apply to all electric hoists that may be operated automatically. 1961-62, c. 81, s. 566.

Selection of
manual or
automatic
control

536.—(1) Every electric hoist shall have installed, only in the same location as the manual controls, a device for the change-over from manual to automatic control.

Idem

(2) Such device shall be operated by authorized personnel only. 1961-62, c. 81, s. 567.

Level or
cage control

537. Where an electric hoist is designed to be operated from control stations on the levels or from a control station on the conveyance, any device used to effect the change-over of control shall be operable only at the level at which a conveyance is stopped. 1961-62, c. 81, s. 568.

- 538.—(1) Devices installed on the levels for the purpose of selecting the conveyance's destination and for initiating hoist motion shall be operable only when the conveyance is stopped at that level, except where the installation has been approved for call operation. ^{Operation of level-installed controls}
- (2) There shall be a minimum delay of five seconds ^{Idem} between the operation of the level control device used to initiate hoist motion and the actual motion when men are being handled.
- (3) The level control device used to initiate hoist motion shall be so located that it may be operated by someone in the conveyance stopped at that level. ^{Idem}
- (4) Devices installed on the levels for the purpose of initiating hoist motion shall, except for jogging, be operable only when the shaft gate at the level at which the conveyance is stopped is in the closed position. 1961-62, c. 81, s. 569. ^{Idem}
- 539.—(1) Devices installed in a conveyance for the purpose of controlling hoist motion shall, except for jogging, be operable only when the cage door is in the closed position. ^{Operation of cage-installed control}
- (2) Where devices are installed in a conveyance for the purpose of controlling hoist motion, one of the devices shall be capable of initiating emergency braking action to bring the conveyance safely to rest. 1961-62, c. 81, s. 570. ^{Idem}
540. Sections 541 to 544 apply to all electric friction hoists. 1961-62, c. 81, s. 571. ^{Friction hoists}
541. Each electric friction hoist shall have installed a device that will initiate emergency braking action to bring the drum to rest in the event of the occurrence of slip between the hoisting rope or ropes and the hoist drum, such as might occur with a conveyance or counterbalance jammed in the shaft or caught at the end of travel. 1961-62, c. 81, s. 572. ^{Jammed conveyance device}
542. Where creep or slip may alter the effective position of safety devices, a means of synchronizing the safety devices with the position of the conveyance in the shaft shall be provided. 1961-62, c. 81, s. 573. ^{Synchronizing device}
543. If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific ^{Special testing}

tests of the efficiency of all electric overwind and underwind devices, signalling and warning devices and hoisting controls and equipment. 1961-62, c. 81, s. 574, *amended*.

Electrical
Hoisting
Equipment
Record
Book

544.—(1) The manager of a mine where an electric hoist is in use shall depute some competent person or persons whose duty it is to examine at least once in each week the hoist motor and control apparatus, electric safety devices and hoisting signalling equipment. 1961-62, c. 81, s. 575 (1), *amended*.

Idem

(2) The report of such examination shall be recorded as provided in subsection 3. 1961-62, c. 81, s. 575 (2).

Idem

(3) The manager shall keep or cause to be kept at the mine for each hoist a book called the Electric Hoisting Equipment Record Book in which shall be recorded a report of every such examination and a notation of any failure or accident to such equipment and the action taken regarding it, signed by the person making the examination. 1961-62, c. 81, s. 575 (3), *amended*.

Idem

(4) Such entries of the weekly examination shall be read and signed every week by the person in charge of such equipment or accessories thereto.

Idem

(5) A notation of the action taken regarding the report of any failure or accident to any part of the electrical equipment used in connection with the hoist or the signalling equipment shall be made over the signature of the person in charge of such equipment or accessories thereto. 1961-62, c. 81, s. 575 (4, 5).

Idem

(6) The Electrical Hoisting Equipment Record Book shall be made available to the district electrical-mechanical engineer at all times. 1961-62, c. 81, s. 575 (6), *amended*.

UNDERGROUND ELECTRICAL INSTALLATIONS

General

545. The provisions of this Part that apply to surface electrical installations apply equally to underground electrical installations, except sections 546 to 563, which apply only to underground electrical installations. 1961-62, c. 81, s. 576, *amended*.

Control of
under-
ground
feeders

546.—(1) Where electrical energy is taken underground, provision shall be made so that the current may be cut off on the surface.

- (2) The control device shall be accessible to authorized ^{Idem} persons only. 1961-62, c. 81, s. 577.
- 547.—(1) Conductors for all circuits not over 150 volts ^{Wiring methods} to ground shall either be installed in standard conduits, armoured or have non-flammable jackets and be adequately supported. 1961-62, c. 81, s. 578 (1).
- (2) All fixed conductors transmitting power underground ^{Idem} at over 150 volts to ground shall be installed in standard conduits or armoured, shall be adequately supported, and any outer jacketing shall be of a non-flammable type.
- (3) Open-type wiring shall not be used except in cases ^{Idem} of emergency. 1961-62, c. 81, s. 578 (2, 3), *amended*.
548. All new cables purchased for the transmission of ^{Cable test required} power underground at a potential in excess of 750 volts shall be accompanied by the manufacturer's certified report of insulation tests, a copy of which shall be filed with the chief engineer. 1961-62, c. 81, s. 579.
- 549.—(1) All cables transmitting power underground at ^{Cable rating} a potential exceeding 750 volts shall have a voltage rating of 50 per cent higher than the normal operating voltage. 1961-62, c. 81, s. 580 (1).
- (2) Cable of standard rating for the normal operating ^{Idem} voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,
- (a) limit ground fault current; and
 - (b) limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,
- and where ground fault protection is provided. 1961-62, c. 81, s. 580 (2), *amended*.
550. The armouring or casings of all cables shall be ^{Bonding requirements} bonded together so as to be electrically continuous and shall be connected at some point or points to a satisfactory ground on surface. 1961-62, c. 81, s. 581.

- Adequate grounding for equipment
551. Where the armouring or casings of cables do not provide an adequate grounding system for underground electrical equipment, a copper or other non-corrosive grounding conductor of adequate size shall be run from such equipment to a satisfactory ground on surface. 1961-62, c. 81, s. 582.
- Terminating facilities
552. Suitable terminating facilities shall be provided to protect cables from harm due to moisture or mechanical damage. 1961-62, c. 81, s. 583.
- Location of junction boxes
553. Junction boxes on a cable transmitting power at a potential exceeding 300 volts shall not be located in a shaft or winze or attached to any timbers at a shaft or winze station or headframe. 1961-62, c. 81, s. 584.
- Approval of splices
554. Splices shall not be made in shaft or winze conductors unless approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 585, *amended*.
- Protection of signal and telephone cables
555. Adequate precautions shall be taken to prevent signal and telephone cables from coming into contact with other electric systems. 1961-62, c. 81, s. 586.
- Maximum voltage of signal system
556. The operating voltage on signal systems shall not exceed 150 volts to ground. 1961-62, c. 81, s. 587.
- Grounding of signal system
- 557.—(1) One conductor of the two-wire signal circuit shall be grounded where the power supply is obtained from a transformer having a primary voltage in excess of 750 volts.
- Idem
- (2) The signal system may be operated with both conductors ungrounded when the supply is from a transformer having a primary voltage in excess of 750 volts, if an insulating transformer having a 1-to-1 ratio is installed between the supply and the signal system. 1961-62, c. 81, s. 588.
- Separate signal for each conveyance
558. Where an electrical hoisting-signal system is installed at a shaft or winze, there shall be a suitable, separate, audible signal system for the control of each hoisting conveyance operated from a single hoist and there shall be a sufficient difference in the sound of the signals to the hoistman that they are easily distinguishable and it shall be so arranged that the hoistman can return the signal to the person giving the signal. 1961-62, c. 81, s. 589.

559. The type and location of transformers installed underground are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 590, *amended*. Trans-
formers,
type and
location
- 560.—(1) All transformers over 2 kva, unless insulated with non-flammable di-electric liquids or Class B or Class C insulation, when installed underground, shall be effectively isolated from the mine workings by enclosure in rooms constructed of fire-resistive materials throughout and a door sill of not less than six inches in height shall be provided. Trans-
formers and
trans-
former
rooms
- (2) No material or equipment of any kind, including air lines, air ducts, water and steam lines, shall pass through or terminate within the room, other than that essential to the transformer installation for its proper operation and safety. Idem
- (3) The covers of the ventilation openings shall be held open by thermal fuse links and shall close by gravity, and the door shall be constructed of steel or other suitable material. 1961-62, c. 81, s. 591 (1-3). Idem
- (4) No installation of transformers containing a liquid which will burn in air shall be located within 200 feet of an explosives or blasting agents storage. Idem
- (5) For installations of transformers containing a liquid which will not burn in air or other suitable types, separation shall be not less than 50 feet from an explosives or blasting agents storage. 1961-62, c. 81, s. 591 (4), *amended*. Idem
- 561.—(1) The supports for electric motors, transformers, control and protective equipment and other electric apparatus and the compartments in which they are installed shall be of such material and constructed in such a manner as to reduce the fire hazard to a minimum. Fire
prevention
under-
ground
- (2) No flammable material shall be stored or placed in the same compartment with any such equipment or apparatus. 1961-62, c. 81, s. 592. Idem
562. Where lamps or heating units are used underground, they shall be so installed and protected as to prevent the heat generated from becoming a fire hazard. 1961-62, c. 81, s. 593. Electric
heaters

Fire-ex-
tinguishing
devices

563.—(1) Approved fire-extinguishing devices for use on electrical fires shall be provided and maintained in condition for immediate use.

Idem

(2) They shall be conveniently mounted at or in every place containing electrical apparatus having flammable insulation or parts that, once ignited, may support combustion. 1961-62, c. 81, s. 594.

ELEVATORS

Interpre-
tation

564.—(1) In this section,

- (a) "attendant" means a person who, as a whole or a part of his normal duties,
 - (i) operates an elevator or incline lift, or
 - (ii) supervises the loading, passage or unloading of persons on an incline lift;
- (b) "dumbwaiter" means a hoisting and lowering mechanism equipped with a conveyance which moves in guides in a substantially vertical direction, the floor area of which does not exceed 9 square feet, whose total inside height whether or not provided with fixed or removable shelves does not exceed 4 feet, the capacity of which does not exceed 500 pounds, and which is used exclusively for carrying materials;
- (c) "elevating device" means an elevator, escalator, dumbwaiter, incline lift or manlift and includes its hoistway enclosure;
- (d) "elevator" means a mechanism affixed to a building or structure equipped with a conveyance or platform that moves in guides at an angle exceeding 70 degrees from the horizontal and that is used to lift or lower persons or freight in or about the building or structure;
- (e) "escalator" means a power-driven inclined continuous stairway used for raising or lowering persons;
- (f) "freight elevator" means an elevator primarily used for carrying freight and on which only the attendant and the persons necessary for unloading and loading the freight are permitted to ride;

- (g) "incline lift" means a mechanism having a power-driven rope, belt or chain, with or without handholds or seats, for lifting or lowering persons or freight on an incline of 70 degrees or less from the horizontal;
- (h) "manlift" means a device consisting of a power-driven endless belt provided with steps or platforms and handholds attached to it for the transportation of persons from floor to floor;
- (i) "passenger elevator" means an elevator used primarily to carry persons.
- (2) Elevating devices, except those covered in subsection 3, shall be designed, installed and maintained in accordance with the edition that is current from time to time of C.S.A. Standard B44, "Safety Code for Elevators, Dumb-waiters and Escalators". Accepted standards
- (3) Aerial tramways, incline lifts and manlifts shall be of a type approved by the chief engineer. Idem
- (4) This section does not apply to, Where section does not apply
 - (a) feeding machines, or belt, bucket, scoop, roller or any similar type of freight conveyor;
 - (b) a lifting device that is,
 - (i) part of a conveyor system,
 - (ii) mechanically loaded and unloaded, and
 - (iii) so fenced in or guarded as to prevent persons from accidentally entering the hoistway;
 - (c) freight ramps having a means of adjusting the slope of the ramp;
 - (d) freight platforms having a rise of sixty inches or less;
 - (e) lubrication hoists or other similar mechanisms;
 - (f) piling or stacking machines used within one storey; or
 - (g) a moving walk.

New in-
stallations,
etc.

- (5) No person shall commence a new installation or a major alteration of an elevator, dumbwaiter, escalator, manlift or incline lift until the drawings and specifications thereof have been approved by the chief engineer.

Drawings
and
specifica-
tions

- (6) The drawings and specifications shall be submitted in duplicate and shall furnish full information as to the size, composition and arrangement of the proposed installation or major alteration.

Inspection
and
approval

- (7) Upon completion of an installation or major alteration, the elevating device shall not be put into use until it has been inspected and approved by the district electrical-mechanical engineer.

Notices
required

- (8) There shall be kept, securely fastened and conspicuously displayed,

(a) in the conveyance of each elevator, dumbwaiter or incline lift; and

(b) as close as is practicable to the bottom landing of each manlift,

a notice, in the form of a metal plate, setting forth the maximum capacity of the elevating device, stating the number of persons and the weight in pounds.

Idem

- (9) Every freight elevator shall have displayed in a conspicuous place in the conveyance a notice in letters not less than one inch high:

"This is not a passenger elevator. No person other than the attendant and freight handlers are permitted to ride in this conveyance".

Ceilings

- (10) The ceiling and its supporting structure over every passageway or other occupied space under an elevating device shall be designed, constructed and maintained so as to safely support the loads that would be applied to it if the conveyance and counterweight dropped.

Idem

- (11) Where the conveyance and counterweight are both equipped with devices to stop them or arrest their descent in the event of a failure of their supports, the strength of the ceiling and its supporting structure may be reduced accordingly.

- (12) There shall be provided safe and convenient access ^{Machine rooms} to every machine room and machinery space.
- (13) Except where otherwise permitted by the chief ^{Idem} engineer, such access shall be by a stairway that is not located in the hoistway.
- (14) Every machine room and machinery space shall be ^{Idem} enclosed or located so that unauthorized persons cannot have access to the machine room or machinery space.
- (15) Only machinery and control equipment required for ^{Idem} the operation of the elevating device shall be permitted in the machine room.
- (16) Sprinklers, pipes, drains, tanks or similar equipment ^{Idem} which might leak or cause condensation shall not be located directly above the machine or control equipment.
- (17) No person under the age of eighteen years shall be ^{Attendants} authorized to operate an elevator.
- (18) Subject to subsection 19, an attendant is required for ^{Idem} every elevator or incline lift.
- (19) An attendant is not required on an elevator or ^{Idem} incline lift equipped with automatic controls and emergency stopping devices that will, in the opinion of the chief engineer, ensure the safety of any person having access to or riding on the elevator or incline lift.
- (20) Every landing shall be adequately lighted. ^{Lighting required}
- (21) No person shall remove, displace, interfere with or damage any device installed in or about an elevating device for its safe operation, except, ^{Test and repair}
 - (a) a district electrical-mechanical engineer making an inspection, or
 - (b) a qualified person for the purpose of making a test or repair.
- (22) Where a safety device has been removed, displaced, ^{Restoration of service after damage} interfered with or damaged, the elevating device shall not be used or operated for any purpose other than testing, inspection or repair until the safety device has been restored to working order.

- | | |
|-------------------------|--|
| Inspection | (23) The ropes, safety devices, signalling devices, doors and other electrical and mechanical equipment necessary to the safe operation of elevating devices shall be inspected by a qualified person at least once each month and the results recorded. |
| Records | (24) The records of such inspections shall be made available to an engineer. |
| Ropes not to be spliced | (25) Hoisting or tail ropes shall not be lengthened or repaired by splicing. <i>New.</i> |

CONSTRUCTION, SURFACE

Interpre-
tation.
ss. 565-596

565.—(1) In this section and in sections 566 to 596,

- (a) “allowable unit stress” means the allowable unit stress assigned to the material by the issue that is current from time to time of the National Building Code of Canada or similar recognized authority, or in the absence of a recognized authority, by a professional engineer, based on good engineering practice;
- (b) “boom of a crane” means the projecting part of a crane from which the load is supported;
- (c) “constructor” means a person who contracts with the owner or agent of a project for the work thereon, and includes an owner or agent who,
 - (i) contracts with more than one person for the work on a project, or
 - (ii) undertakes the work on a project or any part thereof;
- (d) “excavation” means an excavation on a project, and includes a trench, other than a trench excavated for prospecting purposes;
- (e) “extension trestle ladder” means a self-supporting combination of a trestle ladder and a vertically-adjustable single ladder, with a suitable means for locking the ladders together;
- (f) “falsework” means the structural supports and bracing for forms;

- (g) "form" or "formwork" means the mould into which concrete is placed;
- (h) "framed structure" means a structure designed to act as a unit composed of members so connected to one another that a load applied to any member of it may alter the stresses induced in the other members, and includes a truss, a tubular metal frame and a column where the effective length is dependent upon the provision of lateral restraints between the ends of the column;
- (i) "ladder-jack" means a device attached to a ladder used for supporting a scaffold;
- (j) "life jacket" means a life jacket bearing a Department of Transport, Canada Approval Number for a body weight more than 90 lb.;
- (k) "life-net" means a net of adequate strength so placed and supported as to safely catch a person who might fall into it;
- (l) "means of egress" means a passageway, ramp, runway, stairway or ladder leading to an exit from a building, structure or excavation;
- (m) "outrigger scaffold" means a scaffold that is supported by rigid members cantilevered out from the structure to which they are anchored;
- (n) "project" means,
 - (i) a building or other structure that is being constructed, altered, repaired, demolished or moved, or
 - (ii) a roadway that is being built, altered, repaired, demolished or moved;
- (o) "recommended load" means the load established for a scaffold for the particular method of loading by a professional engineer based on the test loading of a tubular metal frame and its accessories and which shall not exceed one third of the failure load when the frame is tested by loading axially through the corner posts;

- (p) "stable slope" means the slope at which the wall of an excavation in soil will safely remain in place without extra support, during the time period when the walls of the excavation will be unsupported;
- (q) "subcontractor" means a person who contracts with a constructor for the work on part of a project and includes a person who contracts with a subcontractor for work on a part of the project;
- (r) "supplier" means an owner of any machine, vehicle, tool or other equipment who provides under any rental, leasing or other arrangement, such equipment for use by a person on a project;
- (s) "trestle ladder" means a self-supporting portable ladder, non-adjustable in length, consisting of two sections hinged at the top to form equal angles with the base.

Applica-
tion of
ss. 566-596

- (2) Except where a contrary intent is provided, this section and sections 566 to 596 apply only to construction operations on the surface of a mining premises or at a plant. *New.*

Responsi-
bility of
contractors
and sub-
contractors

- 566.—(1) The responsibilities of contractors and subcontractors on a project in connection with the requirements of this section and sections 566 to 573 are as prescribed in subsection 12 of section 169.

Machines
to be
in safe
condition

- (2) No supplier shall provide any machine, vehicle, tool or equipment, or any part thereof, for use by a person on a project under any rental, leasing or other arrangement if such machine, vehicle, tool, equipment or part is in an unsafe condition.

Shift
bosses

- (3) Every constructor and every subcontractor shall appoint one or more competent persons to exercise direction and control over persons employed by him on each shift, and one such person may be himself. *New.*

Traffic
control

- 567. Where one or more persons may be endangered by passing vehicular traffic on a road on a project, one or more of the following safeguards located at a

suitable distance from the employees shall be provided as appropriate to give them adequate protection:

1. One or more flagmen.
2. Warning signs.
3. Barriers.
4. Lane control devices.
5. Flashing lights or flares. *New.*

568.—(1) In applying the requirements of sections 566 Applica-
tion, alter-
native
methods
and
materials
to 596,

(a) the composition of an object; and

(b) the size and arrangement of material of an object may vary from that prescribed, but only to the extent that the strength of the object and the safety of its use by persons is equal to or greater than the strength and safety as prescribed and where any conflict arises in the application of these sections as to whether the variation and composition of material of the object or the size and arrangement of material of the object is equal to that prescribed, an engineer's opinion prevails.

(2) In applying subsection 1, the written opinion of the ^{Idem} chief engineer takes precedence. *New.*

GENERAL

569.—(1) During the construction, alteration, repair, <sup>Capacity
to support
loads</sup> dismantling, demolition or moving of a building or other structure, all parts thereof shall be,

- (a) capable of safely supporting the loads to which they may be subjected; or
- (b) adequately braced, either permanently or temporarily, to safely support the loads to which they may be subjected.

(2) All areas in which persons are present, and the means ^{Lighting} of access to and egress from such areas, shall be adequately lighted.

Protection
of floor
openings

- (3) Every opening in a floor or other surface used by persons shall,

- (a) be protected by a guardrail; or
- (b) be covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

Flooring

- (4) During construction of a building, temporary or permanent flooring shall,

- (a) be installed progressively so that the flooring will be provided prior to a person being required to work in a position exceeding two storeys above such flooring or three storeys where the vertical distance between column splices exceeds two storeys;
- (b) where used as a working surface, extend over the whole area except for necessary openings which shall be protected by a guardrail;
- (c) consist of material providing strength sufficient to support any load likely to be applied and at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a span of ten feet;
- (d) be securely fastened to and supported on girders, beams or other structural members capable of safely supporting the applied loads; and
- (e) not be required where the work is being done from a scaffold.

Overhead
protection

- (5) Overhead protection, at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a maximum span of ten feet shall be provided,

- (a) at every means of access to and egress from a building or other structure during construction or demolition where there is danger of material falling on a person;
- (b) above a scaffold, where there is danger of material falling on a person on the scaffold; and

- (c) above an area where a person is required to be directly below other work being done, and there is danger of material falling on the lower person.
- (6) A sufficient number of signs bearing the word ^{Danger} "DANGER" in clearly distinguishable lettering ^{signs} shall be posted,
- (a) where a covering prescribed by subsection 3 has been temporarily removed while work is being done which cannot be done with the covering installed;
 - (b) where the installation of a guardrail is prescribed by the requirements of section 586, and the guardrail has temporarily been removed while work is being done which cannot be done with the guardrail installed;
 - (c) adjacent to a hoisting area;
 - (d) under a suspended scaffold; and
 - (e) at the outlet end of a chute. *New.*
- 570.—(1) Where a structure has suffered damage likely ^{Damaged} to endanger the safety of a person by collapse of all ^{structures} or part of it, the structure shall be braced and shored or other measures taken to prevent injury to a person until the structure is demolished, dismantled, or repaired.
- (2) The bracing and shoring prescribed in subsection 1 ^{Idem} shall be installed progressively so as to provide for the safety of persons installing the bracing and shoring. *New.*
- 571.—(1) Means of access to and egress from every ^{Access and} excavation, floor, roof, platform and scaffold, other ^{egress from} than a suspended scaffold, where work is being ^{work areas} performed, shall,
- (a) be by a stair, runway, ramp or ladder; and
 - (b) be maintained in a safe condition at all times.
- (2) Every means of access and egress prescribed by ^{Idem} subsection 1 and every scaffold from which work is being performed shall,
- (a) be kept clear of obstructions;

- (b) be kept clear of ice, snow or other slippery materials; and
- (c) when necessary to ensure firm footing, be sprinkled with sand or other suitable abrasive material.

Where
stairs
planned

- (3) When work on a building or other structure in which stairs are intended to be part of the permanent building or structure has progressed to two storeys or thirty feet above the lowest floor level, whichever is the lesser, the means of egress shall be by permanent or temporary stairs that shall,

- (a) be provided for the entire height from the lowest floor level to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and

- (b) be continued as the height of the project is increased.

Where
stairs not
planned

- (4) When work on a building or other structure intended to be 100 feet or more in height, and in which stairs are not intended to be part of the permanent building or structure, is in progress, the means of egress shall be by temporary stairs that shall,

- (a) be provided for the entire height from the ground to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and

- (b) be continued as the height of the project is increased.

Exception
to subss. 3, 4

- (5) Subsections 3 and 4 do not apply to the means of egress from a skeleton structure.

Idem.
subs. 4

- (6) Subsection 4 does not apply to a structure, including a chimney stack or pressure vessel, which has a permanent ladder attached to it as part of the

completed structure and the combined structure and ladder are fabricated before being raised into position as a unit. *New.*

- 572.—(1) No person shall be in an area where he might be exposed to injury from a noxious gas, liquid, fume or dust, or due to lack of oxygen unless he is suitably protected against the particular type of hazard. ^{Personal protective clothing, equipment and devices}
- (2) Where the injury exposure referred to in subsection 1 is from skin contact with a noxious gas, liquid, fume or dust, the protection provided shall be, ^{Apparel}
- (a) protective apparel; or
 - (b) protective skin cream suitable for the particular type of hazard.
- (3) Where the injury exposure referred to in subsection 1 is from inhalation of a noxious gas, fume or dust, or due to lack of oxygen, the protection provided shall be, ^{Respirators}
- (a) adequate mechanical ventilation; or
 - (b) the wearing of respiratory equipment suitable for the particular type of hazard.
- (4) A safety belt shall be used by a person on a structure where he is exposed to the danger of falling, and the nearest surface to which he might fall is more than ten feet below the place where he is working. ^{Safety belts}
- (5) The safety belt prescribed in subsection 4 shall be arranged so that if the person should fall he will be suspended at a distance of not more than five feet below the place where he was working. ^{Idem}
- (6) Subsections 4 and 5 do not apply, ^{Exceptions to subss. 4, 5}
- (a) to a person using a means of access or egress;
 - (b) where a life-net is installed to provide equal protection; or
 - (c) to a person who is an erector engaged in connecting structural members of a skeleton structure or in gaining access thereto.
- (7) Where a person may fall into water at a project with the risk of drowning, he shall wear a life jacket. ^{Life jackets}

Exception
to subs. 7

- (8) Subsection 7 does not apply to shallow water in which a life jacket cannot function properly.

Rescue
equipment

- (9) In addition to the life jacket prescribed in subsection 7, rescue equipment shall be provided in a suitable location near the project and, where practicable, shall consist of,

(a) a boat in operating condition, equipped with,

(i) a ring buoy attached to fifty feet of three-eighths of an inch manila rope,

(ii) a boat hook, and

(iii) two or more life jackets to provide one for each of the persons needed to properly operate the boat; and

(b) where there is a current in the water, a line across the water to which there are attached floating objects capable of providing support for a person in the water.

Idem

- (10) In locations where the water is extremely rough or swift or where a manually operated boat is not practical, the boat prescribed in subsection 9 shall be a power boat suitable for the waters involved.

Additional
require-
ments

- (11) Where this section applies,

(a) two or more persons shall be designated and shall be immediately available to perform any necessary rescue operations;

(b) a suitable alarm system shall be provided; and

(c) the designated persons shall immediately commence rescue operations when the alarm is given. *New.*

PROJECT EXCAVATIONS

Services to
be shut off

- 573.—(1) No excavation or trench shall be commenced until all gas, electrical and other services that are likely to endanger the safety of persons have been properly shut off and disconnected.

Stability of
adjacent
buildings

- (2) No excavation shall be made that may endanger the persons on a project or the stability of an adjacent building or structure.

- (3) The walls of an excavation shall be adequately supported by shoring and bracing, and where the excavation is a trench as defined in section 574, the requirements for shoring and bracing as defined therein apply. ^{Walls to be supported}
- (4) Subsection 3 does not apply to the walls of an excavation, ^{Exceptions to subs. 3}
- (a) less than four feet deep;
 - (b) into which persons are not required to enter for any purpose;
 - (c) cut in solid rock;
 - (d) which have been cut and trimmed to a slope having not more than one foot of vertical rise to each foot of horizontal run;
 - (e) which have been cut and trimmed to a slope steeper than that prescribed by clause d, and a professional engineer has certified in writing that the steeper slope is a stable slope which will not endanger persons; or
 - (f) in which persons are not required to be within a horizontal distance of the walls equal to the height of the walls.
- (5) The walls of an excavation shall be stripped of loose rock or other material which might slide, roll or fall upon persons below. ^{Walls to be scaled}
- (6) A clear and reasonably level area extending at least two feet back shall be maintained free of all materials at the top of the walls of an excavation. ^{Flat area at top of walls}
- (7) No vehicle or other machinery shall be driven or operated or located so close to the edge of an excavation as to affect the stability of the walls of the excavation by vibration or otherwise and endanger the safety of any person. ^{Vehicles and machinery}
- (8) The top of the walls of an excavation shall be protected by an adequate barrier at least forty-two inches high if, ^{Barriers}
- (a) the depth of the excavation exceeds ten feet; and

- (b) the safety of a person can be endangered by falling into the excavation.

Warning
lights

- (9) When a person is employed adjacent to or near an excavation which is not required to be protected by a barricade as prescribed by subsection 8, warning lights shall be provided and properly maintained from one-half hour before sunset until one-half hour after sunrise and at such other times as there is equally restricted visibility.

Water

- (10) Every excavation shall be kept reasonably free of water at all times. *New.*

Interpre-
tation

- 574.—(1) In this section and in section 575, "trench" means any excavation in the ground where the vertical dimension from the highest point of the excavation to a point level with the lowest point of the excavation exceeds the least horizontal dimension of the excavation, such dimensions being taken in a vertical plane at right angles to the longitudinal centre line of the excavation.



Shoring
and
bracing
trenches,
exceptions

- (2) The requirements of this section for shoring and bracing the walls of a trench do not apply,
- (a) to a trench less than four feet deep;
 - (b) to a trench into which persons are not required to enter for any purpose;
 - (c) to a trench cut in solid rock;
 - (d) to a trench where the work therein is done only by the owner thereof in person; or
 - (e) to a part of a trench excavated for a pipeline or conduit if the trench is mechanically excavated, if the sections of the line or conduit are permanently assembled before being mechanically placed in the trench, and if the trench is mechanically back-filled.

Shoring
and
timbering

- (3) The sides of all trenches exceeding four feet in depth shall be securely shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the top of the trench, except that where the district mining engineer gives permission in writing to the person in charge of the

work in connection with the trench, the shoring and timbering need not extend above the top of the trench.

- (4) Subsection 3 does not apply where the trench is Application cut in solid rock or where the trench is excavated in hard and solid soil and does not exceed six feet in depth or where the sides of the trench are sloped to within four feet of the bottom of the trench so that the sloped sides of the trench do not have more than one foot of vertical rise to each foot of horizontal run.
- (5) Where the sides of a trench are sloped as described in subsection 4 but not to within four feet of the bottom of the trench, the vertical walls of the trench shall be shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the vertical walls and be fitted with toe-boards to prevent material rolling down the slope and falling into the part of the trench with vertical walls. Trench with sloping sides
- (6) Drawings and specifications for the shoring and timbering of all trenches to exceed thirty feet in depth and all trenches to exceed twelve feet in width shall be submitted in duplicate to the district mining engineer and the trench shall not be commenced until the drawings and specifications have been approved by the engineer and the shoring and timbering shall conform to such approved plans. Drawings for shoring and timbering
- (7) Shoring and timbering shall be carried along with the excavating of a trench but when conditions permit may be done before the excavating commences. When shoring and timbering to be done
- (8) Where the shoring and timbering is to be removed on completion of the other work in a trench, such removal shall be done by or under the personal supervision of a person experienced in removing shoring and timbering. Removal of shoring
- (9)  Ladders or other means of escape satisfactory to the district mining engineer shall be provided in every trench and such ladders or other means of escape shall be spaced at intervals of not more than fifty feet in each trench and shall extend three feet above the top of the trench.  Ladders to be provided

Staging and
scaffolding

- (10) Where staging or scaffolding for handling by hand in relays materials excavated from the trench is erected independently of the shoring or timbering on the sides of the trench, it shall be structurally adequate to protect persons working thereon or in the trench from collapse of the staging or scaffolding or from falling objects.

Idem

- (11) Where the staging or scaffolding is attached to the shoring and timbering on the sides of the trench, the shoring and timbering shall be sufficiently reinforced to withstand the additional load thereby imposed on the shoring and timbering. *New.*

Interpre-
tation

575.—(1) In this section,

- (a) "cleat" means a short member of shoring and timbering that directly resists the downward movement of a strut or wale;
- (c) "sheathing" means the vertical members of shoring and timbering that directly resist pressure from the side of a trench;
- (d) "strut" means a transverse member of shoring and timbering that directly resists pressure from sheathing or wales;
- (e) "wale" means a longitudinal member of shoring and timbering that directly resists pressure from sheathing.

Methods of
shoring and
timbering
trenches

(2) In all methods of shoring and timbering of a trench,

- (a) the sheathing shall be placed against the side of the trench so that the length of each piece of sheathing is vertical;
- (b) the struts shall be horizontal and at right angles to the wales or sheathing supported thereby; and
- (c) the wales shall be parallel to the bottom or the proposed bottom of the trench.

Sheathing

- (3) The sheathing shall be held securely in place against the wales or, where wales are not used, the struts by pressure being firmly exerted on the side of the sheathing adjacent to the wall of the trench.

- (4) Where the trench is excavated in, Idem
- (a) loose, sandy or soft soil;
 - (b) soil that has been previously excavated; or
 - (c) soil under hydrostatic pressure,
- each piece of sheathing shall be driven into the bottom of the trench so as to be firmly held in place.
- (5) Each strut shall be, Struts
- (a) cut to the proper length required to fit it tightly between,
 - (i) the wales, or
 - (ii) where wales are not used, the sheathing,
 supported by the strut; and
 - (b) where necessary, held securely in place by wedges driven between the strut and,
 - (i) the wales, or
 - (ii) where wales are not used, the sheathing,
 supported by the strut.
- (6) Each strut shall, Idem
- (a) have,
 - (i) cleats that extend over the wales supported by the strut, or
 - (ii) other similar devices,
 attached securely to the strut by spikes or bolts; or
 - (b) be placed on,
 - (i) cleats spiked or bolted to posts supporting wales, or
 - (ii) where wales are not used, cleats or other similar devices spiked to the sheathing.

- | | |
|--------------------------|--|
| Wales | <p>(7) Each wale shall be supported,</p> <ul style="list-style-type: none"> (a) on cleats spiked to the sheathing; or (b) by posts set on, <ul style="list-style-type: none"> (i) the wale next below it, or (ii) in the case of the lowest wale, the bottom of the trench. |
| Composition of materials | <p>(8) The composition of materials used for shoring and timbering shall be,</p> <ul style="list-style-type: none"> (a) structural Eastern Spruce; or (b) any other structural material having strength equal to or greater than that prescribed in clause <i>a</i>. |
| Members | <p>(9) Each member used for shoring and timbering shall be a solid piece of material.</p> |
| Wales in trenching | <p>(10) Where wales are used in the shoring and timbering of a trench, the smaller dimension of the wales shall be placed against the sheathing.</p> |
| Composition of materials | <p>(11) The composition of materials used for shoring and timbering may vary from that prescribed in clause <i>a</i> of subsection 8, and the size, composition and arrangement of materials used for shoring and timbering may vary from that prescribed in subsection 16, but only to the extent that the strength of the shoring and timbering is equal to, or greater than, the strength of the shoring and timbering prescribed in subsection 16.</p> |
| Arrangement of sheathing | <p>(12) Where two or more pieces of sheathing are used one above another in the shoring and timbering of a trench, the sheathing shall be arranged so that the lower pieces of sheathing,</p> <ul style="list-style-type: none"> (a) overlap the lowest wales supporting the pieces of sheathing next above it; and (b) are firmly driven into the soil and securely supported by wales and struts as the trench is made deeper. |

- (13) Subject to subsection 14, in the shoring and timbering of a trench, a trench-jack or trench-brace may be used in place of a strut prescribed by this requirement, but only if the strength of the trench-jack or trench-brace is equal to, or greater than, the strength of the strut. Trench-jacks and trench-braces
- (14) Where the trench is over four feet in width, a trench-jack or trench-brace that contains a metal pipe-spacer shall not be used. Idem
- (15) Where a wedge is used in the shoring and timbering of a trench, the thick end of the wedge shall be at least two inches wide. Wedges
- (16) Where the material used for shoring and timbering is that prescribed by clause *a* of subsection 8, the size and arrangement of materials used for shoring and timbering shall be as prescribed in, Where shoring and timbering is structural Eastern Spruce

(a) table 1 for hard and solid soil;

(b) table 2 for soil that may crack or crumble;

(c) table 3 for loose, sandy or soft soil, or soil that has been previously excavated; or

(d) table 4 for soil under hydrostatic pressure,

for depths of trenches shown in column 1 of the tables and shall have,

(e) the pieces of sheathing,

(i) with a thickness and width not less than that prescribed in column 2, and

(ii) arranged so that the horizontal spacing from the centre of one piece of sheathing to the centre of the next piece of sheathing on the same side of the trench is not greater than the spacing prescribed in column 3;

(f) the wales,

(i) with a thickness and width not less than that prescribed in column 4, and

- (ii) arranged so that the vertical spacing from the centre of one wale to the centre of the next wale is not greater than the spacing prescribed in column 5; and
- (g) the struts,
- (i) with a thickness and width not less than that prescribed in column 6, where the trench is six feet or less in width, or with a thickness and width not less than that prescribed in column 7, where the trench is twelve feet or less in width but greater than six feet in width,
 - (ii) arranged so that the vertical spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 8, and
 - (iii) arranged so that the horizontal spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 9.

TABLE 1
(For hard and solid soil)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 6 but not over 10	2 x 8	6	.....	.....	4 x 4	4 x 6	4	9
2	Over 10 but not over 15	2 x 8	4½	6 x 6	4	4 x 6	6 x 6	4	9
3	Over 15 but not over 20	2 x 8	3	8 x 8	4	6 x 6	6 x 6	4	9
4	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
5	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 2
(For soil that may crack or crumble)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 8	4½	4 x 6	4	4 x 4	.....	4	9
2	Over 7 but not over 10	2 x 8	3	6 x 6	4	4 x 4	6 x 6	4	9
3	Over 10 but not over 15	2 x 8	1	6 x 8	4	4 x 6	6 x 6	4	9
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	8 x 8	4	9
5	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
6	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 3
(For loose, sandy or soft soil or soil that has been previously excavated)

ITEM No.	DEPTH OF TRENCH		SHEATHING		WALES		STRUTS			
	Column 1	Feet	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
			Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 8	1½	4 x 6	4	4 x 4	4 x 6	4	9	
2	Over 7 but not over 10	2 x 6	Width of member	6 x 8	3	4 x 6	6 x 6	3	9	
3	Over 10 but not over 15	2 x 6	Width of member	8 x 8	4	6 x 6	6 x 6	4	9	
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	6 x 8	4	9	
5	Over 20 but not over 25	3 x 8	Width of member	8 x 10	4	6 x 8	8 x 8	4	9	
6	Over 25 but not over 30	3 x 8	Width of member	10 x 10	4	8 x 8	8 x 8	4	9	

TABLE 4
(For soil under hydrostatic pressure)

ITEM No.	DEPTH OF TRENCH		SHEATHING		WALES		STRUTS			
			Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 6	Width of member	6 x 8	4	4 x 4	6 x 6	4	9	
2	Over 7 but not over 10	2 x 6	Width of member	6 x 10	3	4 x 6	6 x 6	3	9	
3	Over 10 but not over 15	3 x 8	Width of member	10 x 10	3½	6 x 6	6 x 6	3½	9	
4	Over 15 but not over 20	3 x 8	Width of member	10 x 12	3½	8 x 8	8 x 8	3½	9	
5	Over 20 but not over 25	4 x 8	Width of member	10 x 14	3	8 x 8	8 x 10	3	9	
6	Over 25 but not over 30	4 x 8	Width of member	14 x 14	3	8 x 10	10 x 10	3	9	
Next										

New.

HOUSEKEEPING

- 576.—(1) No tool or other object shall be placed where ^{Tools} it may endanger a person.
- (2) Formwork ties protruding from concrete shall be ^{Formwork ties} removed or cut off at the surface of the concrete as soon as is practicable after removal of the formwork.
- (3) Protruding nails in lumber or scrap material shall be ^{Protruding nails} removed or bent so as not to be a source of danger to persons.
- (4) Waste material and debris on a project shall be ^{Debris} removed to a suitable disposal area as often as necessary to prevent a hazardous condition, but not less frequently than daily.
- (5) Rubbish, debris and other materials shall, ^{Rubbish}
- (a) not be permitted to fall freely from one level to another; and
 - (b) be lowered by a chute or in a suitable container.
- (6) Large objects of rubbish, debris or other similar ^{Idem} material shall be lowered by crane, hoist or other suitable means.
- (7) Subsections 5 and 6 do not apply to a demolition ^{Idem} project where material falls or is dropped into a designated area which is adequately enclosed and to which persons do not have access.
- (8) Every chute shall, ^{Chutes}
- (a) be well constructed and rigidly fastened;
 - (b) if at more than 45 degrees to the horizontal, be enclosed on four sides;
 - (c) where of the open type, be inclined at an angle of 45 degrees or less to the horizontal; and
 - (d) have a strong gate at the bottom end where necessary to control the flow of material from the chute.

Idem

(9) The entrance to a chute shall,

- (a) be so constructed as to prevent hazardous overspill when rubbish, debris or other materials are being deposited into the chute;
- (b) have 4-inch by 4-inch or larger curb or cleat where the entrance is at or below the floor level;
- (c) be not more than four feet high; and
- (d) be kept closed when not in use. *New.*

STORAGE OF MATERIALS

Handling
of materials

577.—(1) Material to be used on or removed from a project,

- (a) shall be stored in an orderly manner and so as not to endanger the safety of persons;
- (b) when being moved or transported on the project, shall be moved only in such a manner that the material cannot endanger the safety of persons; and
- (c) when it is to be off-loaded from a vehicle or stockpile, shall not have any blocking or binder that is required to maintain the material in a safe position removed until the removal of the blocking or binder will not allow the material to shift and endanger the safety of persons.

Storage
of materials

- (2) Building materials or equipment shall not be placed or stored on a permanent or temporary structure so as to exceed the safe loadings of the structure or any part thereof.

Idem

- (3) No building material shall be stored, stacked or piled within six feet of,

- (a) a floor or roof opening;
- (b) the open edge of a floor, roof or balcony; or
- (c) an excavation.

- (4) Subsection 3 does not apply to small masonry units, ^{Masonry units} including bricks and blocks, which can be handled by one person and the material is,
- (a) to be used at the edge of,
 - (i) a floor,
 - (ii) a roof,
 - (iii) an opening in a floor, or
 - (iv) an opening in a roof; and
 - (b) the height of the pile is less than the distance of the pile from the edge described in clause a.
- (5) Lumber, structural steel and similar materials shall ^{Storage of lumber, steel, etc.} be stored so that the pile is secure against collapsing or tipping.
- (6) A pile of lumber more than four feet high shall have ^{Idem, lumber} cross pieces to provide stability.
- (7) Masonry units shall be stacked, ^{Masonry units when stacked}
- (a) on level wooden planks, a platform or other level base;
 - (b) in tiers throughout a pile;
 - (c) so that a vertical face of a pile is not over seven feet in height;
 - (d) when the pile is more than seven feet in height, by progressively stepping the pile back from the vertical faces;
 - (e) when the pile is more than seven feet in height, with wood strips between tiers to provide stability; and
 - (f) with header units in the pile where necessary to provide stability.
- (8) Bagged material shall be, ^{Bagged material}
- (a) piled with cross-piles on the exterior of the pile to prevent movement of the bags;

- (b) piled not more than ten bags high at a vertical face of a pile, except where the pile is in a storage bin or enclosure and the face of the pile is supported by the walls of the storage bin or enclosure; and
 - (c) removed from a pile so that the top of the pile is kept approximately level.
- Pipe and steel (9) Pipe and reinforcing steel shall be stacked in substantially supported and braced racks or frames unless some other provision is made to prevent their movement.
- Flammable liquids (10) No flammable liquid in excess of one day's supply in safe containers shall be stored in a building or structure except in a room with sufficient window area to provide explosion relief to the outside and which is separated from the means of egress from the building or structure.
- Containers (11) A container for a combustible (other than a fuel), corrosive or toxic substance shall,
 - (a) be suitable for the particular substance; and
 - (b) be clearly labeled to identify,
 - (i) the substance,
 - (ii) the hazard involved in the use of the substance, and
 - (iii) the safeguards and protective measures to be taken by persons before, during and after using the substance.
- Fuel containers (12) A container for a fuel shall be identified as to content.
New.

SANITATION

- Drinking water 578.—(1) An adequate supply of potable water shall be kept readily accessible for persons.
- Idem (2) The potable water shall be supplied from a piping system or from a clean, covered container having a drain faucet.
- Drinking cups (3) No person shall be required to, or shall, use a dipper or drinking cup in common with another person.

- (4) Adequate flush toilets, chemical toilets or privies^{Toilet facilities} shall be provided or made available for the use of persons from the start of the project,

- (a) within reasonably easy access of their place of work; and
- (b) so that there is at least one toilet or privy for every thirty or fewer persons on the project at any one time.

- (5) Every flush toilet, chemical toilet or privy shall, ^{Idem}

- (a) be constructed so that any user is sheltered from view and protected from the weather and from falling objects;
- (b) have natural or artificial illumination;
- (c) be provided with adequate supplies of toilet paper and disinfectant;
- (d) be maintained in a clean and sanitary condition;
- (e) be equipped with a toilet seat and cover; and
- (f) if portable, be equipped with a urinal trough in addition to the toilet or privy.

- (6) Washing facilities with adequate clean water, soap^{Washing facilities} and individual towels or other drying equipment shall be provided for persons who use or handle corrosive, poisonous or other substances likely to endanger their safety. *New.*

FIRE PROTECTION

- 579.—(1) Fire extinguishing equipment shall be provided^{Fire extinguishers} where risk of fire exists that is,

- (a) suitable as to type and size for combatting the likely fire;
- (b) protected from mechanical injury;
- (c) located for easy access at suitably marked stations;
- (d) maintained in good operating condition, and
- (e) protected from freezing.

Standpipes

- (2) Where a permanent standpipe is to be installed in a building, it shall,
- (a) be installed progressively, so far as is practicable, as the building construction proceeds;
 - (b) be provided with a valve at each hose outlet;
 - (c) have a 1½-inch diameter hose, with a combination straight stream and fog nozzle, connected to the valve at each hose outlet and shall be installed in all storeys in such locations that each portion of the building is protected by means of hose not over seventy-five feet in length;
 - (d) where applicable, have a suitable connection for the municipal fire department located on the street side not more than three feet and not less than one foot above grade and clear and easy access to the connection shall be maintained at all times; and
 - (e) be provided with adequate water pressure.

Fire
extinguishers

- (3) A fire extinguisher shall,
- (a) be recharged immediately after use and returned to its designated position;
 - (b) be inspected at least monthly and the date of the last inspection recorded on it; and
 - (c) not contain carbon tetrachloride, methyl bromide or other toxic vapourizing liquids.

Water-type
fire
extinguishers

- (4) At least one water-type fire extinguisher of a stored pressure, cartridge operated or pump tank type, having a capacity of two Imperial gallons, shall be provided,
- (a) in every workshop;
 - (b) in every storage building for combustible materials;
 - (c) in places where welding or flame-cutting operations are carried on, while the operations are being carried on and for a reasonable time after their conclusion; and

- (d) on each storey having a floor space of 5,000 sq. ft. or less in an enclosed building being constructed or altered, and an additional fire extinguisher for each additional 5,000 sq. ft. of floor space in the storey or any fraction thereof.
- (5) Clause *d* of subsection 4 does not apply to a single storey building without a basement or cellar. Exception as to clause *d*
- (6) One or more dry chemical fire extinguishers, the contents of which are discharged under pressure and with a capacity of at least four pounds or other equally effective extinguishers shall be provided, Dry chemical fire extinguishers
- (a) where flammable liquids are stored or handled;
- (b) where oil-fired or gas-fired equipment is used; and
- (c) where a tar or asphalt kettle is used. *New.*

ELECTRICAL, WELDING, AND HAULAGE REQUIREMENTS DURING CONSTRUCTION

- 580.—(1) Electrical equipment and wiring methods used during the construction period shall comply with the electrical requirements of this Part. Electrical equipment
- (2) Where welding and burning is done during the construction period, the requirements of section 248 apply. Welding and burning
- (3) Where haulage equipment is used during the construction period, the requirements of sections 238 to 240 apply. *New.* Haulage

TEMPORARY HEAT

- 581.—(1) A fuel-fire heating device shall, Fuel-fired heating devices
- (a) be so located, protected and used that it will not risk the ignition of,
- (i) a tarpaulin or similar temporary enclosure, or
- (ii) adjacent wood or other combustible materials;

- (b) be used only in a confined or enclosed space where there is provided,
 - (i) an adequate supply of air for combustion, and
 - (ii) adequate general ventilation of the space;
- (c) be located so as to be protected from damage or overturning;
- (d) not be located in or adjacent to a means of egress; and
- (e) when used to burn a solid fuel, be connected by a securely supported sheet metal pipe to discharge properly the products of combustion outdoors.

Fuel supply
lines

- (2) Fuel supply lines shall be protected from damage.

Temporary
steam
piping

- (3) Temporary steam piping shall be,

- (a) installed properly and supported securely; and
- (b) insulated or protected by screens or guards where persons may accidentally come into contact with the piping. *New.*

CONSTRUCTION EQUIPMENT

Vehicles,
machinery,
tools, etc.

- 582.—(1) Vehicles, machinery, tools and equipment used on a project,

- (a) shall be in such condition that when used they will not endanger persons;
- (b) shall not be used while being repaired or serviced;
- (c) shall, when operated by motive power, have been inspected by an authorized person at least once in the twenty-four hours prior to their use;
- (d) shall, when applicable, have a safe means of access to the operator's station; and
- (e) shall have at least the same factor of safety as the original design for all modifications, extensions, replacement parts or repairs.

- (2) No person shall operate a motorized vehicle unless he is authorized to do so. Operators of motorized vehicles
- (3) Subsection 2 does not apply to a person, Exception
- (a) who is under instruction in the operation of the vehicle; and
 - (b) who is accompanied by a person who is authorized to operate a motorized vehicle.
- (4) No person shall be on a moving support, including a platform, bucket, basket, load, hook or sling, supported by, Moving supports
- (a) the boom of a crane or other similar hoisting machine; or
 - (b) a fork-lift truck, front-end loader or other similar machine.
- (5) Subsection 4 does not apply to, Exception
- (a) a bucket or basket attached to a hydraulic-powered machine on which the operating controls are on the bucket or basket and the machine is equipped with a fail-safe device which automatically locks the support in position; and
 - (b) the platform of an approved device for hoisting persons.
- (6) All hoisting hooks shall be equipped with a safety catch. Hoisting hooks
- (7) Subsection 6 does not apply to hoisting hooks while being used in the placing of structural members when the method of placing is such that persons are as safe as if a safety catch were installed. Exception
- (8) Friction-type clamps used in hoisting materials shall be so constructed that the accidental slackening of the hoisting cable does not release the clamp. Friction-type clamps
- (9) Where hoisting is done by a device in which the weight of the load is not transferred to ground support at all times, such as by a balloon or helicopter, written permission shall be obtained from an engineer prior to hoisting. Balloons, etc.

Cranes

(10) A crane shall be equipped with a boom,

(a) authorized by the manufacturer; or

(b) designed by a professional engineer and fabricated in accordance with the requirements of his design.

Load-rating plates

(11) Manufacturers' load-rating plates shall be attached to all cranes in clear view of the operator and shall contain sufficient information to enable the operator to determine the safe load which can be hoisted by the crane under any conditions.

Idem

(12) Where the boom of a crane is other than that authorized by the manufacturer, the load-rating plate shall be in accordance with information supplied by a professional engineer.

Guide ropes

(13) Where a person may be endangered by the rotation or uncontrolled motion of a load being hoisted by a crane or similar machine, one or more guide ropes or tag lines shall be used to prevent the rotation or other uncontrolled motion.

Where signalmen required

(14) When the operator of a crane, shovel or similar machine has his view of the path of travel of any part of the machine or its load obstructed, one or more competent signalmen shall assist him by keeping the part of the machine or its load under observation and communicating with the operator by adequate visual signals, or where this is impracticable, by a suitable telecommunication system.

Repairs to pipeline

(15) While a section of a pipeline or hose is under pressure, no person shall commence to disconnect or carry out any repairs on that section.

Pile drivers supply hoses

(16) A hose supplying steam or air to the hammer of a pile driver shall have attached to it a wire rope or chain to prevent the hose from whipping if the hose becomes separated from the hammer.

Lifting jacks

(17) Every lifting jack shall,

(a) have its rated capacity legibly cast or stamped in plain view on the jack; and

(b) be equipped with a positive stop to prevent over-travel or with an indicator where a positive stop is impracticable.

- (18) During the hoisting, placing, removal or with-^{Piles}drawal of piles or sheet-piling, they shall be adequately supported at all times and all persons not actually engaged in the operation shall be kept from the area.
- (19) No internal combustion engine shall be operated, ^{Internal combustion engines}
- (a) in an excavation unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate in the excavation; or
 - (b) in an enclosed building or other enclosed structure unless,
 - (i) the exhaust gases and fumes are discharged directly to outdoors to a point sufficiently remote to prevent their return, or
 - (ii) there is an adequate supply of air for combustion and adequate mechanical exhaust ventilation. *New.*

SPECIAL PROVISIONS

- 583.—(1) Where the walls of an excavation for a well are ^{Excavations for wells} not supported as prescribed by subsection 3 of section 573, no person shall enter or remain in the excavation if it is over four feet in depth, unless,
- (a) a steel liner of adequate strength has been installed which,
 - (i) extends two feet above ground level and to within four feet of the point where the work is being done,
 - (ii) is adequately supported on two sides by steel wire rope, and
 - (iii) is such that the difference between the diameter of the excavation and the diameter of the liner does not exceed four inches; and
 - (b) the person,
 - (i) works from within the steel liner,

(ii) is wearing a safety harness the rope of which is secured at the surface, and

(iii) is attended by another person who is stationed outside the excavation.

Confined spaces

(2) No person shall enter a confined space where the means of egress is restricted, unless,

(a) the space has been tested to ascertain if a hazard exists;

(b) adequate precautions as prescribed by these requirements have been taken against any hazard found to exist;

(c) he is attended by another person stationed outside the confined space; and

(d) suitable arrangements have been made to remove the person from the confined space if he requires assistance, and where practicable, these arrangements shall include his use of a safety harness or safety belt.

Rock drilling operations

(3) During rock drilling operations, an adequate supply of water shall be provided where necessary to control the dissemination of dust into the breathing zone of persons in the area who are not protected as required by subsection 3 of section 572.

Explosives

(4) Where explosives are used on a project, sections 279 to 310 apply. *New.*

RUNWAYS, RAMPS, PLATFORMS

Runways etc.

584.—(1) A runway, ramp or platform, other than a scaffold platform shall be,

(a) designed, constructed and maintained to safely support all loads that may reasonably be expected to be applied to it;

(b) nineteen inches or more in width; and

(c) securely fastened in place.

Ramps

(2) A ramp shall have,

(a) a slope not exceeding one foot of vertical rise to each three feet of horizontal run; and

- (b) cross cleats if the slope exceeds one foot of vertical rise to each eight feet of horizontal run, and the cleats shall be,
 - (i) spaced at regular intervals not exceeding eighteen inches, and
 - (ii) of equivalent strength and have equivalent resistance to slipping as one inch by two inch dressed boards securely nailed to the ramp.
- (3) Subsection 2 does not apply to a ramp installed in the stairwell of a building not exceeding two storeys in height, but every such ramp shall have, Exception
 - (a) a slope not exceeding one foot of vertical rise to one foot of horizontal run; and
 - (b) cross cleats,
 - (i) spaced at regular intervals not exceeding twelve inches, and
 - (ii) of equivalent strength and have equivalent resistance to slipping as two inch by two inch dressed boards securely nailed to the ramp. *New.*

LADDERS

585.—(1) A ladder shall,

Ladders

- (a) be designed, constructed, maintained and used so as not to endanger the safety of any person;
- (b) be used only in such a way that the loads applied do not cause the materials used in any part of the ladder to be stressed beyond the allowable unit stresses for the materials used;
- (c) be free from broken or loose members or other faults;
- (d) have rungs evenly spaced twelve inches on centres;
- (e) have side rails not less than twelve inches apart;

- (f) be placed on a firm footing;
- (g) be held in place by one or more persons while being used, if it exceeds thirty feet in length and is not securely fastened;
- (h) when not securely fastened, be placed so that the base of the ladder is not less than one quarter and not more than one third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder;
- (i) if used as a regular means of access between floors,
 - (i) be securely fastened in place,
 - (ii) extend at least three feet above every landing or floor,
 - (iii) have a clear space of four inches behind any rung, and
 - (iv) be so located that an adequate landing surface, clear of obstructions, is available at the top and bottom of the ladder;
- (j) not be in an elevator shaft or hoistway when such space is being used for hoisting; and
- (k) not be lashed to another ladder to increase its length.

Wooden
ladders

(2) A wooden ladder shall,

- (a) consist of wood that is straight-grained and free from loose knots, sharp edges, splinters and shakes;
- (b) not be painted or coated with an opaque material; and
- (c) have rungs of clear straight-grained material that is free of knots.

Wooden
cleat-type
ladders

(3) A wooden ladder of the cleat type shall have,

- (a) side rails,

- (i) not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches for ladders up to and including nineteen feet long, and
- (ii) not less than $1\frac{5}{8}$ inches by $5\frac{5}{8}$ inches for ladders over nineteen feet long; and

(b) cleats or rungs,

- (i) not less than five eighths of an inch by $2\frac{5}{8}$ inches, and
- (ii) braced by filler blocks between the cleats or rungs.

(4) A double width ladder shall,

Double
width
ladders

- (a) have three rails evenly spaced;
- (b) be not less than five feet in width;
- (c) have cleats or rungs that extend the full width of the ladder; and
- (d) be securely fastened in place.

(5) The maximum length of a ladder measured along the side rail shall be, Maximum
lengths of
ladders

- (a) 16 feet for a trestle ladder, a base section of an extension trestle ladder, or an extension section of an extension trestle ladder;
- (b) 20 feet for a step ladder;
- (c) 30 feet for a single ladder or individual section of a ladder;
- (d) 48 feet for a two-section extension ladder; and
- (e) 66 feet for an extension ladder having more than two sections.

(6) Runs of ladders shall,

Runs of
ladders

- (a) have rest platforms at intervals not greater than thirty-five feet; and
- (b) be offset at every rest platform to provide overhead protection.

- | | |
|--|---|
| Exception | (7) Subsection 6 does not apply to a permanently installed ladder which is provided with a safety cage over its entire length. |
| When ladder used as a self-supporting unit | <p>(8) When a step-ladder is being used as a self-supporting unit,</p> <ul style="list-style-type: none"> (a) the legs shall be fully spread and the spreader shall be locked; (b) the top of the step-ladder shall not be used as a step; and (c) the pail shelf shall not be used as a step. |

STAIRS

- | | |
|-------------------------------|--|
| Temporary stairs and landings | (9) Temporary stairs and landings shall be designed and constructed to safely support a live load of 100 pounds per square foot. |
| Requirements for stairs | <p>(10) Stairs shall,</p> <ul style="list-style-type: none"> (a) have treads and risers uniform in width, length and height in any one flight; (b) have stringers making an angle not exceeding fifty degrees from the horizontal; (c) have a vertical distance between landings not exceeding twelve feet; and (d) have a handrail equivalent to the top-rail of a guardrail as prescribed in these requirements securely fastened and supported in place on the open side or sides of each flight and at each landing. |
| Temporary stairs | (11) Temporary stairs shall have a clear width of not less than thirty inches. |
| Skeleton steel stairs | <p>(12) Skeleton steel stairs shall have temporary wooden treads,</p> <ul style="list-style-type: none"> (a) of suitable planking extending the full width and breadth of the stairs and landings; and (b) securely fastened in place. |

- (13) Clause *b* of subsection 10 and subsection 11 do not ^{Exception} apply to a prefabricated stair erected inside a tower formed by scaffold frame sections where,

- (a) the stringers make an angle not exceeding sixty degrees from the horizontal; and
- (b) the stairs have a clear width of twenty inches.
New.

GUARDRAILS

- 586.—(1) A guardrail shall be provided and maintained ^{Where guardrails required} in good condition,

- (a) around any uncovered opening in a floor, roof or other surface; and
 - (b) at the perimeter or any other open side of,
 - (i) a floor, including a mezzanine and a balcony,
 - (ii) a surface of a bridge,
 - (iii) a scaffold, including a platform, runway or ramp, or
 - (iv) a concrete roof, while the formwork remains in place,
- from which a person may fall,
- (v) into water,
 - (vi) for a vertical distance of four feet or more where the scaffold referred to in subclause iii of clause *b* is used for wheelbarrows or other vehicles, or
 - (vii) for a vertical distance of ten feet or more.

- (2) A guardrail shall have a height of not less than thirty-six inches and not more than forty-two inches ^{Requirements for guardrails, height} above the surface, floor, scaffold or concrete roof on which it is installed.

- (3) A guardrail shall be constructed in accordance with ^{Idem specifications} one of the following specifications:

1. A wooden guardrail, free from splinters and protruding nails, consisting of,
 - i. a top rail not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, securely supported on posts not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, spaced at intervals of not more than eight feet,
 - ii. an intermediate rail not less than three inches wide, securely fastened to the inner side of the post midway between the top rail and the toe-board, and
 - iii. a toe-board securely fastened to the posts or other vertical supports, and extending from the surface, floor, scaffold or roof, to a height of not less than five inches;
2. A wire cable guardrail maintained taut by means of a turnbuckle consisting of,
 - i. a top-rail and an intermediate rail of not less than one-half of an inch diameter wire cable with vertical separators at least two inches wide, spaced at intervals of not more than eight feet, and
 - ii. a toe-board securely fastened to the inner side of the vertical separators and extending from the surface, floor, scaffold or roof to a height of not less than five inches; or
3. Notwithstanding the height limitations of subsection 2, a guardrail of fencing material, commonly referred to as snow fencing, adequately supported in a vertical position and maintained taut, which shall have,
 - i. vertical pieces of lumber four feet long, not less than one and one-half inches wide and three-eighths of an inch thick, painted a distinctive colour, and woven between five double strands of number thirteen Imperial Standard Gauge steel wire so that the lumber shall be tight

between the wire and space at not more than three and one half inches centre to centre, and

- ii. the double stranded wires shall be wrapped round each other at least three times in each space between the lumber and shall be evenly spaced ten inches apart.

- (4) A guardrail shall be constructed in accordance with paragraph 1 of subsection 3 if the district mining engineer is of the opinion that the wire cable guard-rail or fencing material is not installed or is not being maintained in good condition. *New.* Guardrails

SCAFFOLDS

- 587.—(1) Where work cannot be done safely on or from the ground or from a building or other permanent structure, a scaffold constructed as prescribed in this section, or some other equally safe means of support for persons, shall be provided. Where scaffolds required
- (2) No person shall use stilts, a barrel, box or other loose object, Use of loose objects prohibited
 - (a) to stand upon while working; or
 - (b) to support a scaffold or working platform.
 - (3) The erection, use, dismantling or removal of a scaffold shall be done under the supervision of a person experienced in this work. Supervision required
 - (4) During the erection, alteration or dismantling of a scaffold or scaffold platform, work, other than that required for the erection, alteration or dismantling, Carrying on of work
 - (a) shall be done only from the parts of the scaffold or scaffold platform which comply with subsection 1 of section 586 and subsection 5 of this section; and
 - (b) shall not be performed beneath the part being erected, altered or dismantled unless adequate overhead protection is provided.
 - (5) A scaffold shall, Requirements for scaffolds
 - (a) be capable of supporting two or more times the maximum loading to which it may be

subjected without exceeding the allowable unit stresses for the materials used and where the principal component of the scaffold is a tubular metal frame;

- (b) be constructed only of suitable structural material and where lumber is used, it shall be No. 1 Construction Grade Eastern Spruce or better;
- (c) have all uprights diagonally and horizontally braced to prevent lateral movement;
- (d) have no splices between the points of support of horizontal members;
- (e) have footings, sills or supports which shall be sound, rigid, and capable of supporting the maximum load without unsafe settlement or deformation;
- (f) have all necessary fittings and gear, which shall be suitable and properly installed;
- (g) have safety catches on all hooks; and
- (h) be adequately secured to prevent lateral movement at vertical intervals not exceeding three times the least lateral dimension of the scaffold measured at the base.

Require-
ments for
scaffold
platforms

(6) A scaffold platform shall,

- (a) be designed, constructed and maintained to safely support all loads to be applied to it in accordance with clause *a* of subsection 5;
- (b) be at least nineteen inches wide;
- (c) when ten or more feet above a floor, roof or other surface, consist of planks tightly laid for the full width of the scaffold; and
- (d) when lumber is used, have planks which,
 - (i) are of No. 1 Construction Grade Eastern Spruce or better,
 - (ii) are at least two inches thick and ten inches wide,

- (iii) overhang its end supports by not less than six inches and not more than eighteen inches, and
- (iv) are cleated or otherwise secured against slipping.

(7) A suspended scaffold shall,

Require-
ments for
suspended
scaffolds

- (a) be attached to a fixed support or an out-rigger beam capable of supporting four or more times the maximum loading to which it may be subjected, without overturning and without exceeding the allowable unit stresses for the materials used;
- (b) have hangers located not less than six inches and not more than eighteen inches from the ends of the platform;
- (c) when capable of moving either vertically or horizontally,
 - (i) have rope falls equipped with suitable pulley blocks, or
 - (ii) have a mechanical hoisting device equipped with a positive locking device to prevent the scaffold from falling freely;
- (d) not use fibre rope where,
 - (i) the distance between blocks exceeds three hundred feet,
 - (ii) any corrosive substance is in the vicinity of the rope, or
 - (iii) any mechanical grinding or flame cutting equipment is to be used in the vicinity of the rope;
- (e) when not being raised or lowered, where practicable, be secured to and firmly anchored to the building or structure; and
- (f) have wire mesh of at least No. 16 gauge rejecting a ball one and a half inches in diameter, extending from the toe-board to the rail of the guardrail and fastened securely in place.

Boatswain's
chair

(8) A boatswain's chair shall,

- (a) be not less than two feet long and ten inches wide;
- (b) be supported by a sling which shall be at least three-eighths of an inch wire rope, if the workman on the chair is using,
 - (i) any corrosive substance, or
 - (ii) any mechanical grinding or flame cutting equipment; and
- (c) not be required to comply with clauses *b* and *f* of subsection 7.

Safety
belts

(9) Each person on a suspended scaffold shall use a safety belt attached in a satisfactory manner to a separate independently suspended life-line of at least five-eighths of an inch manila rope securely attached overhead to the project or other suitable support in such a way that, failure of the scaffold support does not cause failure of the life-line support, the life-line is free from danger of chafing on any sharp edge, and if the person should fall, he will be suspended at a distance of not more than five feet from the place where he was working.

Exception

(10) Subsection 9 does not apply to a part of a suspended scaffold which is designed, constructed and maintained in such a way that the failure of one support or one suspension will not cause the collapse of the part of the scaffold directly or by progressive collapse of the other supports or suspensions.

Outrigger
scaffolds

(11) An outrigger scaffold shall have,

- (a) the platform commencing within three inches of the wall; and
- (b) outrigger beams which are well secured against horizontal and vertical movement.

Ladder jack
scaffolds

(12) A ladder jack scaffold shall,

- (a) have ladder jacks that transmit their load directly to the ladder side rails;
- (b) not be used to provide a working platform more than ten feet above a floor, roof or any other surface supporting the ladders; and

- (c) not be used where the distance between the ladders exceeds ten feet.

(13) A mobile scaffold mounted on casters or wheels shall, ^{Mobile scaffolds}

- (a) where the height of the scaffold exceeds three times its least lateral dimension measured at the base, be equipped with outriggers, guy wires or other positive means to prevent over-turning;
 - (b) be equipped with a suitable braking device on each wheel;
 - (c) have the brakes applied when any person is on the scaffold or scaffold platform; and
 - (d) not be moved when a person is on the scaffold or scaffold platform except when every person on the scaffold is using a safety belt in a similar manner to that prescribed in subsection 9 for a person on a suspended scaffold.
- New.*

FORMWORK AND FALSEWORK

588.—(1) Every structure and every part of a structure ^{Concrete forms, etc., when adequate} for the purpose of forming concrete shall be designed, constructed, supported and braced to safely withstand all loads likely to be applied to it before, during and after the placing of concrete.

(2) Where shores are used,

^{Where shores used}

- (a) the bracing required by subsection 1 shall include sufficient bracing in the vertical and horizontal planes to prevent lateral movement of the formwork and buckling of the shores; and
- (b) footings for shores shall be sound, rigid and capable of carrying the maximum load without excessive settlement or deformation.

(3) Where shoring is more than one tier in height, the ^{Shoring in tiers} junction of each tier shall be braced to prevent any lateral movement.

Idem

- (4) Without limiting the generality of subsection 1, where falsework consists of shoring more than one tier in height or is a framed structure,
- (a) such falsework shall be designed by a professional engineer to safely withstand the loads mentioned in subsection 1;
 - (b) the drawings of such falsework shall be prepared and shall,
 - (i) show the size and specifications of the falsework, including the type and grade of all materials for its construction,
 - (ii) bear the seal or signature of the professional engineer, and
 - (iii) be kept at the project at all times while the falsework is being constructed or used; and
 - (c) such falsework shall be constructed in accordance with the drawings prescribed in clause *b* and any revisions shall be countersigned by the professional engineer mentioned in clause *a*.

Removal
of forms

- (5) Removal of falsework and formwork shall not be commenced until the concrete has attained sufficient strength to be,
- (a) self-supporting, or
 - (b) capable of being adequately supported by reshoring. *New.*

DEMOLITION

Precautions
to be taken

- 589.—(1) No person shall commence or continue to demolish, dismantle or move a building or other structure until such times as,
- (a) he has taken steps to prevent injury to any person in or near the project or the adjoining property; and

- (b) all existing gas, electrical and other services that are likely to endanger the safety of persons having access to the building or other structure have been properly shut off and disconnected.
- (2) No person shall stand on top of a wall, pier or chimney to remove material therefrom, unless safe flooring or adequate scaffolding or staging is provided on all sides not more than ten feet below his place of working. Standing on walls, etc., prohibited
- (3) Scaffolding shall be made self-supporting to be independent of that portion of the project being demolished. Requirement as to scaffolding
- (4) This section applies to demolition by, Application of section
- (a) a heavy weight suspended by cable from a crane or other hoist machine;
 - (b) a power shovel, bulldozer or other vehicle;
 - (c) any other powered mechanical device;
 - (d) explosives; or
 - (e) any combination of the foregoing.
- (5) The person in charge of demolition shall ensure that no person except his employees directly engaged on the demolition described in subsection 4, enters a demolition zone, Duty of person in charge
- (a) having its centre at the point of demolition; and
 - (b) having a horizontal radius equal to one and a half times the height of the project, or portion of the project being demolished.
- (6) The controls of a mechanical device for demolishing a project shall be operated from a safe location which shall be as remote as is practicable from the demolishing operation. Controls of mechanical devices

Swinging
weights

- (7) Where a swinging weight is used for demolishing, the supporting cable shall be of such length or so restrained that the weight will not swing against any structure other than the structure being demolished.

Glass

- (8) Before demolition commences, glass shall be removed from windows and other locations on the project or otherwise protected so that there is no possibility of breakage of the glass at any stage of the demolition.

Method of
working

- (9) Demolition shall proceed systematically from the highest to the lowest point of the project.

Idem

- (10) In a skeleton structural frame building, the skeleton structural frame may be left in place during the demolition or dismantling of the masonry if the masonry and any loose material is removed from the skeleton structural frame in the order prescribed in subsection 9.

Idem

- (11) The work above each tier or floor shall be completed before the safety of its supports is impaired by the demolition or dismantling operations.

Where work
suspended or
discontinued

- (12) Where work on a building or structure being demolished or dismantled is suspended or discontinued prior to the completion of the demolition or dismantling, access to the part which has still to be demolished or dismantled shall be prevented by the installation of fencing or other equally effective barriers.

Girders

- (13) A truss, girder or other structural member shall not be disconnected until it has been relieved of all loads except its own weight and has been temporarily supported.

Masonry
walls

- (14) Masonry walls shall be removed in reasonably level courses.

Falling
materials

- (15) Materials shall not be loosened or permitted to fall in such masses as to endanger the structural stability of a floor or other support of the project or of any scaffold.

- (16) A basement, cellar or excavation on a project being demolished or dismantled shall be backfilled to grade upon completion of the demolition or dismantling unless the open edges of the basement, cellar or excavation are protected by adequate fencing. ^{Basements to be backfilled}
- (17) Subsection 16 does not apply to a basement or cellar which has a roof, floor or other solid covering over it and all openings are boarded up to prevent access to the basement or cellar. *New.* ^{Exception}

EXPLOSIVE ACTUATED FASTENING TOOLS

- 590.—(1) An explosive actuated fastening tool shall, ^{Fastening tools}
- (a) be operated only by an authorized person who has been duly instructed in the use of the equipment according to the manufacturer's specifications and recommendations;
 - (b) be operated only in accordance with the manufacturer's approved recommendations;
 - (c) be inspected by the operator before use to ensure that it is clean and in all ways suitable for use;
 - (d) not be left unattended in a place where it might be available to an unauthorized person;
 - (e) be stored in a locked container.
- (2) Explosive loads shall, ^{Explosive loads}
- (a) be suitably identified;
 - (b) be stored in separate compartments if of varied strength;
 - (c) be stored in a locked container; and
 - (d) not be left unattended in a place where they may be available to unauthorized persons. *New.*

CONSTRUCTION HOISTS

Interpre-
tation

591.—(1) In this section and in sections 592 to 596,

- (a) “attendant” means a person who is stationed on the conveyance or at its landing places and has control of any movement of the conveyance of the hoist as whole or part of his duties;
- (b) “chimney hoist” means a hoist used for hoisting or lowering persons or materials in or without a chimney;
- (c) “concrete bucket hoist” means a construction hoist used for hoisting or lowering concrete only;
- (d) “construction hoist” means a mechanism for use in connection with the construction, maintenance or demolition of a building, structure or other work on surface of a mining property,
 - (i) for hoisting or lowering materials or persons or both, and
 - (ii) equipped with a conveyance that moves in guides during its vertical movement, and includes its hoistway and hoistway enclosure;
- (e) “materials hoist” means a construction hoist used for hoisting or lowering materials only;
- (f) “operator” means a person who is stationed at the driving unit of a construction hoist and has direct control of any movement of the conveyance of the hoist as the whole or part of his duties;
- (g) “permit” means a permit granted under this section to operate a construction hoist under specific loadings;
- (h) “user” means the person in charge of a construction hoist as owner, lessee or otherwise, but does not include an operator or attendant as such;

- (i) "workmen's hoist" means a construction hoist used for hoisting or lowering persons or materials.
- (2) The specifications for a construction hoist and its equipment, and the general arrangement of the installation including location, tower and hoistway, shall be submitted to the chief engineer for approval and no installation shall be made until such approval has been received. ^{Specifications to be approved}
- (3) The second or any subsequent installation on the same property of a construction hoist and hoistway, originally approved by the chief engineer, may be made on the approval of the district electrical-mechanical engineer, without the submission of plans and specifications, after he has inspected the site. ^{Specifications of subsequent installations}
- (4) Every construction hoist shall have tests conducted to prove the safe operation of all brakes, clutches, safety devices and controls, before being put into operation at a new location and thereafter, at such intervals as to ensure safe operation. ^{Tests}
- (5) The results of such tests shall be recorded in the Machinery Record Book and made available to the district electrical-mechanical engineer. ^{Idem}
- (6) No construction hoist shall be put into operation until a permit showing the maximum allowable loadings for persons or materials has been obtained from the district mining engineer, and such permit shall be displayed in a conspicuous place in the hoisting area. ^{Maximum load permits}
- (7) Where the permit for a construction hoist does not designate the capacity in terms of persons, or persons and pounds, the user of the hoist shall furnish and display a notice, in the conveyance or other load carrying unit of the hoist, setting forth in letters not less than two inches high the words "No person shall ride in or on this conveyance". ^{Notice}
- (8) The prohibition contained in the notice mentioned in subsection 7 applies to every person except a person engaged in the lubrication, repair, erection, dismantling or maintenance of a construction hoist. ^{Idem}

Where
operator
and
attendant
required

- (9) Where a construction hoist has a driving unit that is not directly controlled by a device installed in the conveyance or at each landing of the hoistway, there shall be,

(a) an operator at all times; and

(b) an attendant in the conveyance or at each landing of the hoistway when persons are being conveyed.

Operators
must be
qualified

- (10) Where an operator is required for the operation of a construction hoist, he shall, if required, possess a certificate of qualification.

Attendants
must be
experienced

- (11) Where an attendant is necessary for the operation of a construction hoist, the attendant shall have attained the age of eighteen years and shall have had adequate training and experience to perform his duties safely.

Safety of
persons

- (12) Every construction hoist and all equipment used in connection therewith shall be so designed, installed and maintained that the safety of persons being carried or being near shall be ensured at all times.

Load
capacity
certificate

- (13) The owner or user of a construction hoist shall provide a certificate from the manufacturer or an independent person approved by the chief engineer showing the maximum allowable weight that the hoist is capable of handling.

Protection
of hoist
operators
and hoists

- (14) The operator of a construction hoist and the hoist shall be adequately protected against falling objects and other hazards consistent with the project.

Idem

- (15) The installation shall be so arranged that the hoist operator will have the maximum practicable view of the tower.

Idem

- (16) The building housing the hoist shall be adequately lighted.

Idem

- (17) The machine area, tower landings and pit shall be kept free of building materials, debris, and equipment not required for the hoist.

Idem

- (18) Flammable fuels, oil or other readily combustible materials shall be stored away from the hoist area.

- (19) The main overhead beams at the top of the tower and the immediate members supporting the beams shall, Main
overhead
beams of
hoist towers

(a) be of steel; and

(b) safely support the loads likely to be imposed thereon, including,

(i) twice the maximum load on the ropes suspended from the overhead beams, and

(ii) the weight of the overhead beams and machinery thereon, and

(iii) be rigidly and safely supported at each end.

- (20) A construction hoist tower shall, Hoist
towers

(a) be of steel;

(b) safely support the loads likely to be imposed upon it, including,

(i) twice the maximum static load suspended from the overhead beams,

(ii) any loads due to a hoist boom or concrete bucket chute,

(iii) the weight of the tower, and

(iv) loads due to wind and ice;

(c) be supported upon a safe, firm, level foundation such that the tower will remain in vertical alignment and the bearing capacity of the soil will not be exceeded by the maximum load from the tower, the hoist and its load;

(d) extend above the top landing so that, when the conveyance is at the top landing, ten feet of overhead clearance will be provided from the topmost part of the conveyance to the lowest part of the tower or machinery over the hoistway;

(e) not be located wholly or partially in front of an entrance to a building;

- (f) be plumb;
 - (g) be securely braced or guyed to the building or to other adequate anchorage at vertical spacings of not over forty feet; and
 - (h) have each guy wire of steel, a quarter of an inch or larger in diameter, securely attached at each end with rope clips, and with a turn-buckle to adjust its length.
- Foundations (21) Where part of a building or structure is used for a hoist foundation, it shall be constructed or reinforced to withstand any load that is likely to be placed upon it, and any space beneath a hoist foundation shall be enclosed to prevent any person from entering therein.
- Access to sheaves (22) Safe means of access to the overhead sheaves shall be provided by a ladder from the highest landing of the tower.
- Assembling steel (23) In the assembling of the segments of steel hoist towers, connections shall be made with bolts, pins or special devices to prevent the connections from accidentally disengaging.
- Counter-weight runways (24) Where the counterweight runway is located within 36 inches of the building floor or landing, the entire length of the runway adjacent to the building shall be screened with wire mesh (16 gauge) that will reject a ball one and one half inches in diameter.
- Counter-weight guards (25) Counterweight guards shall consist of a metal frame and No. 16 gauge sheet steel, or plywood three-quarters inch thick, properly reinforced and braced, and securely fastened in position.
- Idem (26) Guards shall be installed on all counterweight runways in the open side or sides at grade or working levels and extend to a height of at least eight feet above that level. *New.*
- Hoistways 592.—(1) The hoistway of a construction hoist shall be enclosed,
- (a) on sides not facing conveyance entrances at the lowest landing to a height of at least six feet; and
 - (b) on sides facing conveyance entrances, from the top of each landing opening to the under-

side of the next landing above or to the top of the hoistway, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter and the mesh shall be securely fastened to the tower.

- (2) The enclosure described in clause *b* of subsection 1 ^{Where enclosure not required} may be omitted where the conveyance is equipped on its entrance sides with a door of the vertically sliding or horizontal-swinging type,
 - (a) extending from within two inches of the conveyance floor to a height of not less than five feet;
 - (b) consisting of a metal frame and No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter; and
 - (c) equipped with a positive locking device.
- (3) A hoistway within a building shall be fully enclosed, ^{Wire mesh} except at landing entrances, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter or with substantial building materials having equivalent strength and openings.
- (4) The hoistway pit shall be deep enough to allow ^{Pits} the conveyance platform or bucket to descend to the proper level required for smooth loading and unloading at the lowest landing.
- (5) A substantial gate shall be provided at each entrance to the hoistway of a construction hoist and shall, ^{Requirements for hoistway gates}
 - (a) extend from within two inches of floor level to a height of six feet;
 - (b) be of the vertically-lifting or horizontally-sliding type, or one-section horizontally-swinging type;
 - (c) not be of the vertically-collapsible type;
 - (d) reject a ball one and a half inches in diameter;
 - (e) be located between two and four inches of the landing platform; and
 - (f) provide minimum headroom clearance of six feet six inches when in the open position.

Counter-weights

- (6) A counterweight for a gate shall be so enclosed that it will be retained if its means of suspension fails.

Latches

- (7) Each gate shall be equipped with a mechanical latch to keep the gate in the closed position.

Contact light switches

- (8) Each landing gate shall be equipped with an electric contact switch that will turn on a light to indicate to the hoist operator when the gate is fully closed.

Landing platforms

- (9) A substantial landing platform shall be provided at each entrance to the hoistway of a construction hoist and shall,

(a) be securely fastened and safely supported at each end; and

(b) be at least equal in width to the hoistway entrance and have, except at the lowest landing, for at least five feet to each side, a guard railing forty-two inches in height and a toe-board five inches in height, with the space between the railing and the toe-board filled in completely and securely with No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter or equal enclosure. *New.*

Conveyances

593.—(1) The conveyance of a construction hoist shall,

(a) be designed using a factor of safety of not less than five, based upon static loads and ultimate stresses of the materials;

(b) adequately support fifty or more pounds per square foot of conveyance floor area;

(c) operate in steel guides that will adequately withstand, without permanent deformation or damage, the application of the safety devices;

(d) be equipped with approved guide shoes or rollers adjusted to provide only the necessary running clearance between the shoes and the guide rails;

(e) be equipped with a safety device that will stop and sustain the conveyance when loaded to its maximum capacity should the means of suspension fail;

- (f) be located so that the clearance between the conveyance platform and the landing sill is not less than three-quarters of an inch and not more than two inches;
 - (g) be enclosed on each non-entrance side with a toe-board five inches in height and with No. 16 gauge wire mesh extending at least six feet in height above the conveyance floor and rejecting a ball one and a half inches in diameter or shall be enclosed with solid material of adequate strength;
 - (h) have an adequate hood, part of which may be hinged, composed of No. 10 gauge wire mesh rejecting a ball one and a half inches in diameter or composed of solid material of equivalent strength;
 - (i) be equipped with a door or doors at least five feet in height above the conveyance floor, when used for the handling of persons, and so arranged that the doors can not open outward;
 - (j) be equipped when conveying persons with safety devices activated by governors arranged to trip at 25 per cent above normal operating speed.
- (2) Where a wheelbarrow or other rolling equipment is to be transported, restraining cleats or blocks shall be provided on the conveyance platform. ^{Cleats and blocks}
- (3) All counterweights shall have their sections strongly bolted together, shall be so placed that they cannot fall on any part of the machinery and shall be suspended in guides in such a manner that they will run freely. ^{Counterweights} *New.*
- 594.—(1) The hoisting rope or ropes of a construction hoist shall. ^{Hoist ropes}
- (a) safely support the maximum static load to be imposed upon it without exceeding the ultimate breaking strength of the rope divided by the factor of safety for a construction hoist rope as set forth in the table in clause *k*;
 - (b) be not less than one half inch in diameter and composed of not less than six strands each of nineteen steel wires;

- (c) where used on a drum hoist have at least three complete turns of rope on the drum when the conveyance is at its lowest point of travel;
- (d) be examined daily for kinks, broken wires or other physical defects;
- (e) be properly dressed and maintained in a safe working condition;
- (f) be protected from falling material and rope-ways shall be maintained free of all material;
- (g) not cross over or under ropes from other hoists;
- (h) not be spliced;
- (i) not encircle or be supported or guided by a sheave or drum whose diameter is less than twenty-four times the diameter of the rope in use;
- (j) be securely anchored at each end by approved means;
- (k) provide a factor of safety, when considering the static loadings involved, not less than required in the following table:

TABLE
Minimum Factors of Safety for Hoisting Ropes

Rope Speed (Feet per Minute)	Minimum Factor of Safety		Rope Speed (Feet per Minute)	Minimum Factor of Safety	
	Workmen's Hoist	Materials Hoist		Workmen's Hoist	Materials Hoist
50	7.60	6.65	300	9.20	8.20
75	7.75	6.85	350	9.50	8.45
100	7.95	7.00	400	9.75	8.70
125	8.10	7.15	450	10.00	8.90
150	8.25	7.30	500	10.25	9.15
175	8.40	7.45	550	10.45	9.30
200	8.60	7.65	600	10.70	9.50
225	8.75	7.75	650	10.85	9.65
250	8.90	7.90	700	11.00	9.80

(2) Where practicable, travelways and walkways shall ^{Travelways} be routed clear of ropes and the hoistman's view of the hoistway, but in any event, a safe travelway shall be provided.

(3) No used rope shall be installed anew or used on a ^{Used ropes} newly installed hoist until its condition has been proven satisfactory by examination, electro-magnetic test, laboratory test or combination of these tests as required by the district electrical-mechanical engineer.

(4) No rope shall be used where more than 5 per cent ^{Broken wires in ropes} of the total number of wires in any one lay of the rope are broken, or where visual inspection shows evidence of severe wear, corrosion, kink, or other possible cause of rope failure. *New.*

595.—(1) Electrical or mechanical means of signalling the ^{Signals} operator of a construction hoist shall be provided at each landing,

(a) where the travel of the conveyance is more than thirty-five feet; or

(b) where the hoist operator does not have a clear view of the landing.

(2) The following code shall be used to give signals to ^{Code} a hoist operator:

1 signal—Stop immediately if in motion.

1 signal—Hoist.

2 signals—Lower.

*3 signals—Persons will be on conveyance, operate carefully.

*(This signal to be given before persons enter the conveyance).

(3) Where the operator does not have a clear view of all ^{Voice communication} the hoistway landings, the operator shall have voice communication with each landing, but movement of the conveyance shall be made upon signal only.

(4) The voltage of the signal system shall not exceed ^{Voltage} 30 volts. *New.*

SPECIFICATIONS

Specifica-
tions

596.—(1) Every construction hoist shall be,

- (a) equipped with a permanent tag or nameplate showing the horse power of the driving unit;
- (b) securely fastened to its foundation;
- (c) equipped with a brake or brakes that will stop and hold the conveyance when 150 per cent loaded, at every position in the hoistway;
- (d) if electrically driven, so arranged that the brake or brakes will be applied automatically in case of power failure;
- (e) if of a drum winder type, equipped with drum flanges of a height sufficient to provide a clearance of not less than twice the nominal diameter of the rope above the top layer of rope on the drum;
- (f) equipped with a device to indicate to the operator,
 - (i) position of conveyance in the hoistway,
 - (ii) limits of travel,
 - (iii) position at which underwind and overwind protective devices operate, and
 - (iv) position of all points at which landings may be made;
- (g) when the hoisting drum is of the free-running type, equipped with a pawl or other device that will hold the conveyance with its maximum load at any point in the hoistway;
- (h) provided with a disconnect switch at each location, wired in series, when the machine and the controller are in separate locations.
- (i) equipped with limit switches;
- (j) properly guarded to prevent injury to persons from gearing, shafting or other equipment;

- (k) capable of lifting the conveyance and its maximum allowable load, and it shall not be loaded beyond its rated capacity;
 - (l) not operated until the hoistway is provided with adequate overwind and underwind clearance;
 - (m) not used for the transportation of men at any time, unless equipped as a workmen's hoist.
- (2) Every workmen's hoist, in addition to the requirements of section 591, shall be, Workmen's
hoists
additional
require-
ments
- (a) equipped with two or more ropes;
 - (b) equipped with overwind and underwind limit switches activated by the movement of the conveyance or counterweight, and in the latter case, the overwind protective device may be located at the lower end of travel;
 - (c) equipped with a speed control device which shall automatically return to the "off" or "neutral" position when released;
 - (d) equipped with a slack rope device, a reverse phase relay and a stop motion switch where the hoist is of the drum winding type;
 - (e) so arranged that the brake or brakes shall be applied automatically in case of failure of electrical supply to the safety circuit, and one brake shall be mechanically applied and electrically released;
 - (f) so arranged that the power unit shall drive the hoist drum when the conveyance is being raised or lowered and no mechanism for disconnecting the hoist drum from the power unit shall be available;
 - (g) not used for the purpose of handling men and materials simultaneously with the exception of hand tools;
 - (h) not operated until the hoistway is provided with,
 - (i) buffers in the pit,
 - (ii) a counterweight guard at the bottom of the hoistway, and

- (iii) an electro-mechanical interlock on each landing gate or a means to lock the gate mechanically so that it cannot be opened from the landing side unless the conveyance is at the landing, but at the lowest landing means of unlocking the gate from the landing side shall be provided;
- (i) inoperable unless the conveyance doors and hoistway gates at all landings are fully closed;
- (j) so arranged that control of the movement of the conveyance shall be by a conveyance-switch or push-button located in the conveyance with or without a push-button at each landing;
- (k) provided with a Machinery Record Book in which shall be recorded inspections, tests, and other data as required.

Concrete
bucket
hoists

- (3) The requirements of this Part applicable to construction hoists apply also to concrete bucket hoists, except that a conveyance safety device shall not be required.

Idem

- (4) No person shall ride in or on a concrete bucket, except any person engaged in maintenance or repair work.



Chimney
hoists

- (5) The plans and specifications for chimney hoists and the general arrangements of the installation shall be submitted to the chief engineer for approval before being put into use.

Tower
booms

- (6) The bottom fastening of a boom to the tower shall be located at a level where guy ropes are fastened at horizontal girts, and the upper fastening for the boom shall be located at a distance not less than one-half the length of the boom above its bottom fastening and at a level where guy ropes are fastened at horizontal girts.
- (7) The boom and its associated equipment shall be of an approved design and construction and operated in a safe manner.
- (8) A qualified person shall be in charge of the operation of the boom. *New.*

GENERAL

- 597.—(1) No person shall wilfully damage or, without ^{Wilful damage to property} proper authority, remove or render useless any fencing, casing, lining, guide, means of signalling, signal, cover, chain, flange, horn, brake, indicator, ladder, platform, steam gauge, water gauge, safety valve, electrical equipment, fire-fighting equipment, first-aid equipment or other appliance or thing provided at a mine or plant in compliance with this Act. 1961-62, c. 81, s. 595.
- (2) No person under the influence of or carrying in- ^{Persons under the influence of or carrying liquor} toxicating liquor shall enter a mine or be in the proximity of a working place on the surface or near machinery in motion. 1961-62, c. 81, s. 596.
- (3) Abstracts of the provisions of this Act, authorized ^{Abstracts to be posted} by the chief engineer, shall be posted up in suitable places at the mine or works where they can be conveniently read, and the owner, agent or manager of the mine shall maintain such abstracts duly posted, and the removal or destruction of any of them is an offence against this Act. 1961-62, c. 81, s. 597.
-  (4) The owner, agent or manager of a mine or plant shall ^{Act available} maintain a copy or copies of Parts IX and XI of this Act at each mine or plant and such Parts shall be available for reference on request by any employee.
- (5) The owner, agent or manager of a mine or plant shall ^{Name of district engineer posted} maintain a notice at each mine or plant in suitable places setting out the name, address and telephone number of the district engineer for the mine or plant. *New.* 
- (6) The Minister may prescribe the charge to be made ^{Charges} for any record or log book required under this Part. 1961-62, c. 81, s. 598.

TESTING LABORATORIES

598. The Minister may, out of the moneys that are ^{Testing laboratories} appropriated for the purpose, establish, maintain and operate one or more laboratories for the purpose of testing or examining hoisting ropes or other appliances used in or about a mine and, by regulations made by the Lieutenant Governor in Council, may provide for,

(a) the management and operation of such laboratory or laboratories;

- (b) the charges to be paid for services performed in such laboratory or laboratories;
- (c) such other purposes as the Lieutenant Governor in Council deems proper. 1961-62, c. 81, s. 599.

PARTY WALLS

Boundary
operations

599.—(1) Subject to section 195 and except by agreement under subsection 3, no mining operations shall be carried on within a distance from the property boundary of a mine or mining property of twice the width or thickness of the orebody at the boundary, measured parallel to the boundary from foot wall to hanging wall and normal to the dip, and in no event shall mining operations be carried on within a distance of twenty feet from the boundary measured from the perpendicular to the boundary,

(a) except that, for the purposes of preliminary investigation, development headings may be advanced to twenty feet from the boundary; and

(b) except that exploratory diamond drilling may be done.

Exception

(2) Subsection 1 does not apply to operations at sand, gravel or clay pits or open-cast rock quarries. 1961-62, c. 81, s. 600 (1, 2).

Agreement
by adjoining
owners or
their agents

(3) Adjoining owners or their agents may, by agreement in writing signed by them, carry on mining operations within the distances from the property boundary mentioned in subsection 1.

Certified
copies to
chief
engineer

(4) Two certified copies of every such agreement shall be sent to the chief engineer. 1961-62, c. 81, s. 600 (3, 4), *amended*.

Disagree-
ment on
boundary
operations

600.—(1) Where adjoining owners or their agents are unable to agree to carry on mining operations within the distances from the property boundary mentioned in subsection 1 of section 599, application may be made to the Minister by either owner or his agent requesting the appointment of a committee to investigate in what manner and within what distances from the boundary mining operations may be carried on. 1961-62, c. 81, s. 601 (1), *amended*.

Appoint-
ment of
committee

(2) Upon receipt of an application under subsection 1, the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to investigate mining conditions at the boundary.

- (3) The committee so appointed shall hear representations from the adjoining owners and conduct such investigation of mining conditions on the adjoining mining properties as may be necessary at a time or times named by the Minister. ^{Duty of committee}
- (4) Upon completion of their investigation, the committee shall forthwith submit a report in writing to the Minister with recommendations concerning terms and conditions of mining operations at the boundary. ^{Report of committee}
- (5) Upon receipt of the report of the committee, the Minister may issue an order establishing the terms and conditions to be observed in mining operations at the boundary and shall fix the costs of the committee to the adjoining owners. 1961-62, c. 81, s. 601 (2-5). ^{Order of Minister}
- 601.—(1) Where the owner or his agent of a mine or mining property has reason to believe that a breach has been made in or a trespass has been committed with respect to the party wall between his mine or mining property and an adjoining mine or mining property, application may be made to the Minister by the owner for the appointment of a committee to examine the party wall and enter the adjoining mines or mining properties with an assistant or assistants and use where necessary the workings and appliances thereof. 1961-62, c. 81, s. 602 (1), *amended*. ^{Suspected breach or trespass of party wall}
- (2) Upon receipt of an application under subsection 1, the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to conduct such examination of the party wall as may be necessary. ^{Appointment of committee}
- (3) The committee so appointed shall conduct such examination of the party wall as may be necessary at a time or times named by the Minister. ^{Duty of committee}
- (4) Upon completion of the examination the committee shall forthwith submit a report of its findings in writing to the Minister. ^{Report of committee}
- (5) Upon receipt of the report of the committee, the Minister shall fix the costs of the committee to one or both owners. ^{Costs}
- (6) Where a breach has been made in a party wall of a mine by the owner of an adjoining mine, or by his ^{Breach of party wall}

employees or agents, without the permission in writing of the owner of the first-mentioned mine or without authority under this Act, the Minister may make an order directing the offending owner to close the breach permanently or to carry out such measures as the Minister deems necessary to prevent water from flowing into the mine of the owner complaining of the breach.

Minister
may
authorize
entry

- (7) Where work has been discontinued in the mine of the offending owner or where expedient for any other reason, the Minister may authorize the owner complaining of the breach, his employees or agents, to enter the mine and works of the offending owner to erect bulkheads and carry out such measures as the Minister deems necessary to protect from damage the mine of the owner complaining of the breach and his employees and agents from danger from from accumulations of water in the mine of the offending owner. 1961-62, c. 81, s. 602 (2-7).

Minister
may vary or
rescind
order

602. For good cause shown and upon such terms as seem just, the Minister may vary or rescind an order made under section 600 or 601. 1961-62, c. 81, s. 603.

BRINE WELLS

Interpre-
tation

- 603.—(1) In this section,

- (a) "brine well" means a hole or opening in the ground for use in brining;
- (b) "brining" means the extraction of salt in solution by any method. 1961-62, c. 81, s. 604 (1).

Permit to
bore or drill
a brine well

- (2) No person shall drill or bore a brine well except under the authority of a permit in writing issued by the chief engineer upon application therefor in the prescribed form. 1961-62, c. 81, s. 604 (2), *amended*.

Permits not
issued

- (3) A permit shall not be issued,
- (a) to authorize a person to drill or bore a brine well on property in which he does not own, hold or lease, or is not otherwise entitled to, the mining rights; or
- (b) where the proposed brine well is nearer the boundary of such property than 500 feet.

- (4) The chief engineer may reduce or extend the distance referred to in clause *b* of subsection 3 where in his opinion it is advisable to do so and shall notify the applicant of any such reduction or extension within thirty days from the date upon which the application for the permit is filed. Location of brine well
- (5) A permit is subject to the condition that the brine well in respect of which it is issued is bored or drilled in the location described in the permit. 1961-62, c. 81, s. 604 (3-5). Condition of permit
- (6) A permit shall be issued or refused within thirty days from the date on which the application therefor is filed, except that, where notice has been given by the chief engineer under subsection 4, the permit shall be issued upon the receipt by the chief engineer of the applicant's consent thereto. 1961-62, c. 81, s. 604 (6), *amended*. Time for issuance of permit
- (7) Where a person drills or bores a brine well, he shall forward a log of the drilling or boring in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the drilling or boring operations, and, upon his request in writing, the log shall be confidential for a period of six months. Log of drilling operations
- (8) A person boring or drilling a brine well shall take such reasonable measures as are necessary to control the infiltration of water from one horizon to any other horizon that may be penetrated during the drilling or boring operations. Protection of water horizons
- (9) All brine wells shall be cased and equipped so as to reasonably ensure against the uncontrolled flow of oil, natural gas, brine or water. Protection of deposits
- (10) Casing and equipment shall be in good condition and of a thickness and strength adequate to withstand any fluid pressure to which they might normally be subjected. Standard of casing and equipment
- (11) Where practicable, all brine wells shall be plugged by the person operating them, before being abandoned, in a manner that will, Plugging of abandoned wells
 - (a) reasonably ensure that salt horizons and potential oil or natural gas producing horizons are protected; and
 - (b) retain water and brine in their original formations.

Report of
proposed
plugging

- (12) Before commencing to plug a brine well, the person proposing to carry out the plugging operations shall report the particulars thereof to the chief engineer in the prescribed form.

Record of
plugging
operations

- (13) Where a person plugs a brine well, he shall forward a record of the plugging in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the plugging operations. 1961-62, c. 81, s. 604 (7-13).

FATAL ACCIDENTS

Notice

- 604.—(1) The manager or other person in charge of a mine or plant wherein or in connection wherewith a fatal accident occurs shall forthwith notify a coroner having jurisdiction in the place where the accident occurred.

Inquest

- (2) Where a fatal accident occurs in or in connection with a mine or plant, an inquest shall be held.

Right of
engineer
re inquest

- (3) The engineer and any person authorized to act on his behalf are entitled to be present and to examine or cross-examine any witness at an inquest held concerning a death caused by an accident at a mine or plant, and, if the engineer or someone on his behalf is not present, the coroner shall, before proceeding with the evidence, adjourn the inquest and give the Deputy Minister not less than four days notice of the time and place at which the evidence is to be taken.

Notice of
fatal
accidents

- (4) Where, in or about a mine, plant, quarry, or sand, clay or gravel pit, an accident occurs that causes loss of life to a person employed thereat, the owner, agent, manager or superintendent thereof shall immediately notify the engineer resident in that part of Ontario in which the accident occurred and the chief engineer by telephone or telegraph.

Scene to be
undisturbed

- (5) Subject to subsection 6, no person shall, except for the purpose of saving life or relieving human suffering, interfere with, destroy, carry away or alter the position of any wreckage, article or thing at the scene of or connected with the accident until the engineer has completed an investigation of the circumstances surrounding the accident.

- (6) Where it is impossible for the engineer to make an immediate investigation of an accident, the chief engineer or engineer may permit the wreckage, article and things at the scene of or connected with the accident to be moved to such extent as is necessary to permit the work of the mine, plant, quarry, or sand, clay or gravel pit, to be proceeded with, if photographs or drawings showing details of the scene of the accident have been made prior to the moving. 1961-62, c. 81, s. 169, *amended*.

NON-FATAL ACCIDENTS

605. Where, in or about a mine, plant, quarry, or a sand, clay or gravel pit, an accident occurs to a person employed therein that causes fracture or dislocation of any bones of the body, or any other injury that in the opinion of the attending physician may result in the injured person being incapacitated for regular work for at least one day, the owner, agent or manager shall within three days of the accident send notice in writing to the engineer resident in that part of Ontario in which the mine, plant, quarry or pit is situate on the form prescribed for such purpose. 1961-62, c. 81, s. 605, *amended*.

SPECIAL OCCURRENCES

- 606.—(1) Where, in or about a mine or plant,
- (a) an accident involving the hoist, sheaves, hoisting rope, shaft or winze conveyance, or shaft or winze timbering;
 - (b) an explosion or fire involving an air compressor, air receiver or compressed air line;
 - (c) an inrush of water from old workings or otherwise;
 - (d) a failure of an underground dam or bulkhead, as defined by subsection 1 of section 278;
 - (e) an outbreak of fire below ground or an outbreak of fire above ground if it endangers any structure of the mine plant;
 - (f) a premature or unexpected explosion or ignition of explosives or blasting agents;

- (g) an asphyxiation effecting a partial or total loss of physical control;
- (h) a flammable gas in the mine workings;
- (i) an unexpected and non-controlled extensive subsidence or caving of mine workings; or
- (j) a failure or incident which causes, or threatens to cause, injury to personnel or damage to major equipment or property involving,
 - (i) electrical equipment,
 - (ii) standard gauge railway equipment, or
 - (iii) crane equipment,

occurs, whether or not loss of life or personal injury is caused thereby, the owner, agent or manager of the mine shall, within the twenty-four hours next after the occurrence, send notice in writing in duplicate to the engineer resident in that part of Ontario in which the mine or plant is situate and shall furnish, upon request, such particulars in respect thereof as the engineer requires.

Notice of
fire and
need of
rescue
equipment

- (2) Where, in or about a mine, an outbreak of fire occurs that endangers the health or safety of one or more persons and the services of the mine rescue stations are required, the manager shall immediately notify the mine rescue training officer and the district mining engineer resident in that part of Ontario in which the mine is situate.

Rockburst

- (3) Where a rockburst occurs, whether or not loss of life or personal injury is caused thereby, and its location is determined as being within the workings of a mine, the manager of the mine shall, within the twenty-four hours next after the location of the burst has been determined, send notice in writing to the district mining engineer resident in that part of Ontario in which the mine is situate and shall furnish, upon request, such particulars with respect thereto as the engineer requires.

Record of
rockbursts

- (4) A record of the occurrence of all rockbursts at a mine shall be kept, showing, as far as possible, the time, location, extent of the burst, any injury to persons and any other information pertaining to the

burst, and such record shall be available to the district mining engineer at all times. 1961-62, c. 81, s. 606, *amended*.

OTHER NOTICES AND INFORMATION

607.—(1) The owner or agent of a mine or plant shall give ^{Written notice by owner or agent} or cause the manager to give to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine or plant is situate, written notice of,

- (a) (i) the intended installation of, including the specifications and layout of,
 - 1. any mine hoisting facilities,
 - 2. any power supply facilities, and
 - 3. any ore treatment facilities,
- (ii) the lot, concession and township on which the operations are to commence,
- (iii) the name and address of the person in charge;
- (b) the connection or reconnection of any mining electrical equipment with a source of electrical energy controlled by any other person, at least fourteen days prior to the connection or reconnection;
- (c) the commencement, or resumption after an interruption of one month or more, of mining operations, within fourteen days after the commencement or resumption; and
- (d) the closing down of the mine and that,
 - (i) the requirements of subsection 1 of section 168 as to the fencing of the top of the shaft, entrances from the surface, pits and openings,
 - (ii) the requirements of section 289 as to the disposal of explosives and blasting agents,
 - (iii) the requirements of section 351 as to the abandonment of a shaft compartment for hoisting purposes and as to the removal and disposition of hoisting ropes,

- (iv) the requirements of section 425 as to the disconnection of the supply station from the power source and notification of same to the chief engineer, and
- (v) the requirements of subsections 7 and 8 of section 609 as to the filing of plans and sections,

have been complied with within fourteen days of the closing down.

Information
for
engineer

- (2) The owner, agent or manager of a mine or plant shall furnish to the engineer resident in that part of Ontario in which the mine or plant is situate all information that the engineer requires for the purposes of his returns. 1961-62, c. 81, s. 607, *amended*.

STATISTICAL RETURNS

Statistical
returns

- 608.—(1) For the purpose of their tabulation, under the instruction of the Minister, the owner, agent or manager of every mine, plant, pit, quarry or other works to which this Act applies shall, on or before the 31st day of March in every year, send to the Department on the forms supplied a correct return for the year that ended on the 31st day of December next preceding, showing the number of persons ordinarily employed below and above ground respectively, the total amount of wages paid during the year, the quantity in standard weight of the minerals dressed and of the undressed mineral that has been sold, treated or used during such year, and the value or estimated value thereof, and such other particulars as the Minister by regulation prescribes.

Monthly or
quarterly
returns

- (2) The owner, agent or manager of every metalliferous mine shall, if required, make a similar return for the month or quarter at the end of each month or quarter of the calendar year.

Offence

- (3) Every owner, agent or manager of a mine, plant, pit, quarry or other works who fails to comply with this section, or makes a return that is to his knowledge false in any particular, is guilty of an offence against this Act. 1961-62, c. 81, s. 608, *amended*.

MINE OR PLANT PLANS

Plans to be
kept

- 609.—(1) At every mine, the owner, agent or manager shall cause the following plans on a scale acceptable to the

chief engineer to be kept up to a date not more than six months last past:

1. A surface plan showing the boundaries of the property, the co-ordinates of the section of property under which mining has been done, all lakes, streams, roads, railways, electric power transmission lines, main pipe lines, buildings, adits, open surface workings, diamond-drill holes, outcroppings of rock, dumps, tailings-disposal sites and shafts, the latter having been geographically located by connection with a survey on record with the Department.
 2. The method of capping any opening shall be described on the plans referred to in item 1.
 3. Underground plans of each level and section showing all underground workings, including shafts and tunnels, diamond-drill holes, dams and bulkheads, and each level plan shall be shown on a separate drawing.
 4. Vertical mine sections at suitable intervals and at suitable azimuths, showing all shafts, tunnels, drifts, stopes and other mine workings in relation to the surface, including the location of the top of the bedrock, surface of the overburden and the bottom and surface of any known watercourse or body of water, and each section shall be shown on a separate drawing.
 5. Adequate ventilation plans, showing the direction and volume of the main air currents, the location of permanent fans, ventilation doors and stoppings, and connections with adjacent mines.
- (2) The owner, agent or manager of every mine in which ^{Idem} electricity is used underground shall keep or cause to be kept up to a date not more than six months last past an adequate plan or diagram showing on a suitable scale the following information:
1. The position of all fixed electrical apparatus in the mine.
 2. The routes of all fixed power feeders and fixed branch feeders properly noted and referenced.

3. The rating of all electrical feeder control apparatus and equipment.

Idem

- (3) Such plans or diagrams shall be available to the district electrical-mechanical engineer at all times and copies of the plans or diagrams shall be furnished him upon request.

Plans to be available to engineer

- (4) On any examination or inspection of a mine or plant, the owner, agent or manager shall, if required, produce to the engineer or other person authorized by the Minister or the Deputy Minister all plans and sections of the workings referred to in subsections 1, 2 and 3.

Marking subsequent progress on plan

- (5) The owner, agent or manager shall, if required by the engineer or other person authorized by the Minister or Deputy Minister, cause to be marked on such plans and sections the progress of the mine up to the time of the examination or inspection, and shall furnish him with a copy or tracing thereof.

Plans of working mines to be filed

- (6) A certified copy of the plans required by paragraph 3 of subsection 1 and mine sections showing all shafts as required by paragraph 4 of subsection 1 shall be made and forwarded to the chief engineer on or before the 31st day of March in each year, showing the workings of the mine up to and including the 31st day of December next preceding.

Plans to be filed before abandonment

- (7) Before a mine or part of a mine is abandoned, closed down or otherwise rendered inaccessible, all underground plans and sections referred to in paragraphs 3 and 4 of subsection 1 shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer.

Idem

- (8) Before work at a mine ceases, the surface plan referred to in paragraph 1 of subsection 1 showing all openings to underground workings shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer.

Responsibility of owner

- (9) The owner, agent or manager of every mine, plant, pit, quarry or other works to which this section applies is responsible for compliance with the provisions thereof and every owner, agent or manager or other person who fails to comply with any of the

provisions of this section, or who produces to an engineer or other authorized person, or files or causes to be produced or filed, a plan that to his knowledge is false in any particular is guilty of an offence against this Act.

- (10) Every such plan shall be treated as confidential information for the use of the officers of the Department and shall not be exhibited, nor shall any information contained therein be imparted to any person except with the written permission of the owner or agent of the mine or plant. 1961-62, c. 81, s. 609, *amended*. Plans to be treated as confidential

POWERS AND DUTIES OF ENGINEERS

610.—(1) It is the duty of the engineer and he has power, Powers of engineer

- (a) to make such examination and inquiry as he deems necessary to ascertain whether this Act is complied with, and to give notice in writing to the owner, agent or manager of any particulars in which he considers the mine or plant or any part thereof, or any matter, thing or practice, to be dangerous or defective or contrary to this Act, and to require the same to be remedied within the time named in the notice;
- (b) to enter, inspect and examine any mine or plant or any part thereof at any reasonable time by day or night, but so as not to unnecessarily impede or obstruct the working of the mine or plant;
- (c) to order the immediate cessation of work in and the departure of all persons from any mine or plant or part thereof that he considers unsafe, or to allow persons to continue to work therein on such precautions being taken as he deems necessary; and
- (d) to exercise such other powers as he deems necessary for ensuring the health and safety of miners and all other persons employed in or about mines, plants, pits, quarries or other works.

- (2) It is the duty of the engineer to make a report of every examination and inquiry made in the course of his duties during the year to the Minister, the Deputy Minister or the chief engineer, as required by Reports of engineer

the circumstances, immediately upon the completion of the examination or inquiry. 1961-62, c. 81, s. 610, *amended*.

Special
report

611.—(1) The Minister may direct an engineer to make a special report with respect to any accident in or about a mine or plant that has caused the loss of life or injury to any person, or with respect to any condition in or about a mine or plant. 1961-62, c. 81, s. 611 (1), *amended*.

Engineer
may take
evidence

(2) In conducting the inquiry, the engineer has power to compel the attendance of witnesses and the production of books, documents and things, and to take evidence upon oath. 1961-62, c. 81, s. 611 (2).

Offence

612.—(1) Non-compliance with a written order of the engineer issued in accordance with section 610 shall be deemed an offence against this Part.

Idem

(2) Failure to give written notice of the completion of any work in accordance with a written order of the engineer issued under section 610 shall be deemed an offence against this Part. 1961-62, c. 81, s. 612.

R.S.O. 1960,
c. 241,
Pt. XI
(1961-62,
c. 81, s. 1),
re-enacted

3. Part XI of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

PART XI

OFFENCES, PENALTIES AND PROSECUTIONS

Offences

620.—(1) Every person who,

- (a) prospects, occupies or works any Crown lands or mining rights for minerals otherwise than in accordance with this Act;
- (b) performs or causes to be performed on any Crown lands, or on any lands where the mining rights are in the Crown, any boring by diamond or other core drill for the purpose of locating valuable mineral in place, except where such Crown lands or mining rights have been staked out and recorded as a mining claim in accordance with this Act;
- (c) wilfully defaces, alters, removes or disturbs any post, stake, picket, boundary line, figure,

writing or other mark lawfully placed, standing or made under this Act;

- (d) wilfully pulls down, injures or defaces any rules or notices posted up by the owner, agent or manager of a mine or plant;
- (e) wilfully obstructs the Commissioner or any officer appointed under this Act in the execution of his duty;
- (f) being the owner or agent of a mine, refuses or neglects to furnish to the Commissioner or to any person appointed by him or to any officer appointed under this Act the means necessary for making an entry, inspection, examination or inquiry in relation to a mine under this Act, other than Part IX;
- (g) unlawfully marks or stakes out in whole or in part a mining claim, a placer mining claim, or an area for a boring permit;
- (h) wilfully acts in contravention of this Act, other than Part IX or Part X, in any particular not hereinbefore set forth;
- (i) wilfully contravenes any provision of this Act or any regulation for the contravention of which no other penalty is provided;
- (j) wilfully makes any material change in the wording or numbering of a miner's licence after its issue; or
- (k) attempts to do any of the acts mentioned in the foregoing clauses,

is guilty of an offence against this Act and is liable to a fine of not more than \$20 for every day upon which the offence occurs or continues. 1961-62, c. 81, s. 620 (1), *amended*.

- (2) Every person who knowingly makes a false statement^{False statements} in an application, certificate, report, statement or other document filed or made as required by or under this Act or the regulations is guilty of an offence and is liable to a fine of \$500 or to imprisonment for a term of not more than six months, or to both. 1961-62, c. 81, s. 620 (2).

Smelters

621.—(1) No person shall construct or cause to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals that may result in the escape or release into the open air of sulphur, arsenic or other fumes in quantities that may injure trees or other vegetation unless and until the site of the plant has been approved by the Lieutenant Governor in Council.

Offence

(2) Every person who constructs or causes to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals, without the approval of the Lieutenant Governor in Council, and sulphur, arsenic or other fumes escape or are released therefrom into the open air and injure trees or other vegetation is guilty of an offence and is liable to a fine of not more than \$1,000 for every day upon which such fumes escape or are released therefrom into the open air. 1961-62, c. 81, s. 621.

Disobeying
order or
award of
Commissioner

622. Every person who wilfully neglects or refuses to obey any order or award of the Commissioner, except for the payment of money, is, in addition to any other liability, liable to a fine of not more than \$250 and, upon conviction thereof, is liable to imprisonment for a term of not more than six months unless the fine and costs are sooner paid. 1961-62, c. 81, s. 622.

Use of word
"Bureau"
prohibited

623.—(1) No person who,

(a) carries on the business of mining or dealing in mines, mining claims, mining lands, or mining rights, or the shares, stocks, or bonds of a mining company; or

(b) acts as broker or agent in or for the disposal of mines, mining claims, mining lands, or mining rights, or of any such shares, stocks or bonds; or

(c) offers or undertakes to examine or report on a mine, mining claim, mining land or mining rights,

shall use the word "Bureau" as the name or title or part of the name or title under which he acts or carries on business.

Offence

(2) Every person who contravenes any of the provisions of this section is guilty of an offence and is liable to a fine of not more than \$20 for every day upon which

the offence occurs or continues. 1961-62, c. 81, s. 623.

- 624.—(1) In this section, the noun “mine” includes ^{Interpre-} “plant” as defined in Part IX. *New.*
- (2) An owner, agent or other person who contravenes ^{Penalty for} any provision of Part IX is guilty of an offence and is ^{offence} liable to a fine of not more than \$1,000. ^{against} ^{Part IX}
- (3) Where the Deputy Minister or an engineer has given ^{Additional} written notice to an owner or agent or a person ^{penalty for} engaged or employed in or about a mine that an ^{continuing} offence has been committed against Part IX, such owner or agent or other person is liable to a further fine of not more than \$100 for every day upon which the offence continues after such notice.
- (4) An owner, agent or other person is, upon conviction, ^{Imprison-} liable to imprisonment for a term of not more than ^{ment} three months unless the fine and costs are sooner paid.
- (5) Where the offence is one that might have endangered ^{Imprison-} the safety of those employed in or about the mine or ^{ment of} caused serious personal injury or a dangerous ^{offender} accident, and was committed wilfully by the personal ^{against} act, default or negligence of the accused, every person ^{Part IX} who is guilty of an offence against Part IX is, ^{in certain} in addition to or in substitution for any fine that may ^{cases} be imposed, liable to imprisonment with or without hard labour for a term of not more than three months. 1961-62, c. 81, s. 624.
- 625.—(1) No prosecution shall be instituted for an offence ^{Instituting} against Part IX or Part X or any regulation made in ^{prosecutions} pursuance thereof except, ^{for offences}
- (a) by an engineer;
- (b) by direction of the county or district Crown attorney; or
- (c) by the leave in writing of the Minister of Justice and Attorney General,
- or for an offence against any other provision of this Act or of any regulation made in pursuance thereof except,

(d) by or by leave of the Commissioner or a recorder;

(e) by direction of the county or district Crown attorney; or

(f) by leave of the Minister of Justice and Attorney General.

When
person not
actual
offender not
liable

(2) No person not being the actual offender is liable in respect of such offence if he proves that he did not participate in the contravention of the provision for a breach of which he is charged and that he was not to blame for the breach and that according to his position and authority he took all reasonable means in his power to prevent the breach and to secure compliance with the provisions of Part IX or Part X.

Onus of
proof

(3) The burden of proving that the provisions of sections 172 to 596 have been suspended is upon the person charged with a contravention thereof and any such suspension may be proved by the evidence or certificate of an engineer. 1961-62, c. 81, s. 625.

Procedure
on
prosecutions

626. Except as to offences against section 14, every prosecution for an offence against or for the recovery of a penalty imposed by or under the authority of this Act shall take place before a provincial judge or before the Commissioner, and, save as herein otherwise provided, *The Summary Convictions Act* applies to every such prosecution. 1961-62, c. 81, s. 626, *amended*.

R.S.O. 1960,
c. 387

Commence-
ment

4. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

5. This Act may be cited as *The Mining Amendment Act, 1970*.

An Act to amend The Mining Act

1st Reading

February 27, 1969

2nd Reading

April 2nd, 1970

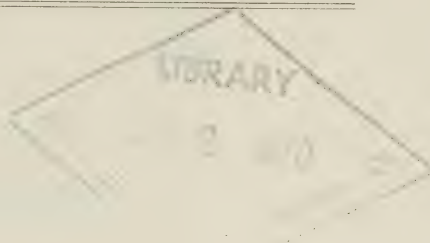
3rd Reading

MR. LAWRENCE (St. George)

(Reprinted as amended by the
Natural Resources and Tourism Committee)

BILL 2

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Mining Act

MR. LAWRENCE (St. George)

BILL 2

1970

An Act to amend The Mining Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Paragraph 1 of section 1 of *The Mining Act* is amended by inserting after “mine” in the third line “or plant”, so that the paragraph shall read as follows: R.S.O. 1960, c. 241, s. 1, par. 1, amended

1. “agent”, where it occurs in Parts IX and XI, means a person having, on behalf of the owner, the care or direction of a mine or plant or a part thereof.

(2) Paragraph 10 of the said section 1 is amended by inserting after “boilers” in the second line “compressors” and by adding at the end thereof “or plant”, so that the paragraph shall read as follows: R.S.O. 1960, c. 241, s. 1, par. 10, amended

10. “machinery” includes steam and other engines, boilers, compressors, furnaces, milling and crushing apparatus, hoisting and pumping equipment, chains, trucks, tramways, tackle, blocks, ropes and tools, and all appliances used in or about or in connection with a mine or plant.

(3) Paragraphs 12 and 13 of the said section 1 are repealed and the following substituted therefor: R.S.O. 1960, c. 241, s. 1, pars. 12, 13, re-enacted

12. the noun “mine”, except as defined in Part IX, includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral or mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on, and all ways, works, machinery, plant, buildings and premises below or above ground belonging to or used in connection with the mine, and also any quarry, excavation or opening of the ground made for the purpose of searching for or

removal of mineral, rock, stratum, earth, clay, sand or gravel and any roasting or smelting furnace, concentrator, mill, work or place used for or in connection with washing, crushing, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any of such substances.

13. the verb "mine" and the word "mining", except as defined in Part IX, include any mode or method of working whereby the earth or any rock, stratum, stone or mineral-bearing substance may be disturbed, removed, washed, sifted, leached, roasted, smelted, refined, crushed or dealt with for the purpose of obtaining any mineral therefrom, whether it has been previously disturbed or not.

R.S.O. 1960,
c. 241, s. 1,
par. 18,
amended

(4) Paragraph 18 of the said section 1 is amended by inserting after "mine" in the fourth line "or plant" and by inserting after "mine" in the seventh line and in the ninth line "plant", so that the paragraph shall read as follows:

18. "owner", when used in Parts IX and XI, includes every person, mining partnership and company being the immediate proprietor or lessee or occupier of a mine or plant or a part thereof, or of any land located, patented or leased as mining land, but does not include a person or a mining partnership or company receiving merely a royalty, rent or fine from a mine, plant or mining lands, or being merely the proprietor of a mine, plant or mining lands subject to a lease, grant or other authority for the working thereof, or the owner of the surface rights and not of the ore or minerals.

R.S.O. 1960,
c. 241,
Pt. IX
(1961-62,
c. 81, s. 1),
re-enacted

2. Part IX of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

PART IX

OPERATION OF MINES

Interpre-
tation

161.—(1) In this Part,

- (a) "authorized" means properly authorized to perform any specified duty or to do any specified act;

- (b) "engineer" means a member of the Association of Professional Engineers of the Province of Ontario who is designated by the Department as "chief engineer" or as "district mining engineer", or as "district electrical-mechanical engineer";
- (c) "manager" means the owner of a mine or plant or a part thereof or his agent, or a person designated by the owner or his agent as responsible for the control, management and direction of a mine, plant or a part thereof;
- (d) the noun "mine" includes any opening or excavation in, or working of the ground for the purpose of winning, opening up or proving any mineral-bearing substance, and any ore body, mineral deposit, stratum, rock, earth, clay, sand or gravel, or place where mining is or may be carried on and also any quarry, excavation or opening in the ground made for the purpose of searching for or removal of mineral, rock, stratum, earth, clay, sand or gravel, and any premises below or above ground belonging to or used in connection with the mine not included in the definition of the noun "plant";
- (e) the verb "mine" and the word "mining" mean the performance of any work in or about a mine;
- (f) "mine rescue training officer" means a person in charge of a mine rescue station and responsible for mine rescue training;
- (g) the noun "plant" includes any roasting or smelting furnace, concentrator, mill or place and work used for or in connection with washing, crushing, grinding, sifting, reducing, leaching, roasting, smelting, refining, treating or research on any substance included under the noun "mine" and all ways, works, machinery, buildings and premises above ground used in connection therewith;
- (h) "professional engineer" means a person who is a member of or is licensed by the Association of Professional Engineers of Ontario;

- (i) "qualified" means properly qualified to perform any specified duty or to do any specified act;
- (j) "safety" means freedom from injury to the body or freedom from damage to the health of a person.

Where Part
does not
apply

- (2) The provisions of this Part do not apply to cook-houses, bunkhouses, recreational centres, dwellings, and the grounds used in connection therewith. 1961-62, c. 81, s. 1, par. 12, *part, amended*.

EMPLOYMENT IN AND ABOUT MINES

Employ-
ment, of
children,

- 162.—(1) No person under the age of sixteen years shall be employed in or about a mine or plant, and no person under the age of eighteen years shall be employed underground in a mine or at the working face of an open-cut workings, pit or quarry.

of females

- (2) No female person shall be employed on underground work in any mine or at the working face of an open-cut workings, pit or quarry, except,
 - (a) those who have to enter the underground parts of a mine for the purpose of a non-manual occupation; or
 - (b) those employed in health and welfare services; or
 - (c) those who, in the course of their studies spend a period of training in the underground parts of a mine. 1961-62, c. 81, s. 162, *amended*.

MINE RESCUE STATIONS

Establish-
ment

- 163.—(1) Mine rescue stations shall be established, equipped, operated and maintained at such places and in such manner as the Minister directs. 1961-62, c. 81, s. 163 (1).

Mine rescue
training
officers

- (2) The Lieutenant Governor in Council may appoint such mine rescue training officers as he deems advisable.

Duty of
mine rescue
training
officers

- (3) The equipment and operation of mine rescue stations shall be in the charge of mine rescue training officers, and it is the duty of such officers to teach and train mine rescue crews and supervisors in the use and maintenance of the apparatus in such manner

as the chief engineer directs, to maintain the apparatus in efficient and workable condition so as to be available for immediate use, and to perform such other duties as the chief engineer deems necessary.

- (4) The owner, agent or manager of a mine shall cause such workmen and supervisors to be trained in the use and maintenance of mine rescue equipment as the district mining engineer deems necessary. 1961-62, c. 81, s. 162 (2-4), *amended*. Training of rescue crews
- (5) The mine manager is responsible for the supervision and direction of mine rescue crews in all mine rescue and recovery operations conducted at the mine. Responsibility in mine rescue operations
- (6) The cost of establishing, maintaining and operating mine rescue stations shall be paid out of the Consolidated Revenue Fund. Cost
- (7) The Workmen's Compensation Board shall at the end of each quarter year reimburse the Consolidated Revenue Fund from moneys assessed and levied by the Board against employers in the mining industry for the total amount certified by the Deputy Minister to have been paid out under subsection 6. Idem
- (8) All moneys received from the sale or disposal of any equipment, buildings or machinery forming part of or appertaining to mine rescue stations shall be paid to the Workmen's Compensation Board and shall be placed to the credit of the class funds of the employers in the mining industry. 1961-62, c. 81, s. 162 (5-8). Disposal of equipment, etc.
- (9) Fresh air bases shall be strategically located in deep mines and their design, locations, equipment and use are to be approved by the chief engineer. *New*. Fresh air bases

HOURS OF LABOUR UNDERGROUND

164.—(1) In this section,

Interpretation

- (a) "shift" means a body of workmen whose hours for beginning and terminating work in the mine are the same or approximately the same;
- (b) "workman" means a person employed underground in a mine who is not the owner or agent or an official of the mine,

and, where any question or dispute arises as to the meaning or application of clause *b* of subsection 2 or as to the meaning of "shift", "workman", or "underground", the certificate of the engineer is conclusive.

Hours of
labour
under-
ground

- (2) No workman shall remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours, which eight hours shall be reckoned from the time he arrives at his place of work in the mine until the time he leaves such place, except that,

- (a) a shift or any part of a shift may remain or be allowed to remain underground in a mine for more than eight hours in any consecutive twenty-four hours on one day of a week for the purpose of avoiding work on Sunday or on a holiday or changing shift;
- (b) such limit does not apply to a foreman, pumpman, cagetender, or any person engaged solely in surveying or measuring, nor does it apply in cases of emergency where life or property is in imminent danger, nor does it apply to repair work which is necessary for normal production.

Hours of
operator
of hoist

- (3) No person shall operate or be permitted to operate, either on the surface or underground, a hoist, by means of which persons or material are hoisted, lowered or handled in a shaft or winze, for more than eight hours in any consecutive twenty-four hours, except,

- (a) that, in the event of one of the regular hoistmen being absent from duty through sickness or otherwise and where no competent substitute is available, the remaining hoistman or hoistmen may work extra time not exceeding four hours each in any consecutive twenty-four hours for a period not exceeding fourteen days;
- (b) that, in the case where the work at a mine or in a shaft or winze at a mine is not carried out continuously on three shifts per day, the hoistman may work such extra time as is necessary for lowering or hoisting the workmen employed on the shift at the beginning and end of each shift;
- (c) in the cases provided for in clauses *a* and *b* of subsection 2. 1961-62, c. 81, s. 164 (1-3).

QUALIFICATIONS OF HOISTMEN

- 165.—(1) No person under the age of twenty-one years Age limit of hoistmen and no person who has not had adequate experience on a reversing hoist shall be authorized to operate a hoist by which persons are handled in a shaft or winze at a mine.
- (2) No person under the age of eighteen years shall be Idem authorized to operate a hoist at a mine.
- (3) No person shall operate or be permitted to operate a hoist at a shaft or winze in which persons are handled at a mine, or for any other purpose designated by an engineer, unless he has been examined by a legally qualified medical practitioner acceptable to the employer and the medical practitioner has issued to him on the form prescribed a hoistman's medical certificate to the effect that to the best of the practitioner's knowledge the person is not subject to any infirmity, mental or physical (particularly with regard to sight, hearing and heart), to such a degree as to interfere with the efficient discharge of his duties. 1961-62, c. 81, s. 165 (1-3), *amended*.
- (4) Every hoistman's medical certificate lapses and shall be deemed to have expired at the end of one year from its date. Expiry of certificate
- (5) Every hoistman's medical certificate shall be kept Filing of certificate on file by the employer and made available to an engineer at his request.
- (6) A record of all hoistmen's medical certificates pertaining to hoistmen operating in any one hoistroom shall be kept posted therein, showing the names of the hoistmen and the date of the last certificate issued to each. Posting record of certificates
- (7) This section does not apply to the operation of a Automatic hoist hoist when on automatic or semi-automatic control. exempted 1961-62, c. 81, s. 165 (4-7).
166. Where a contravention of section 162, 164 or 165 takes place, the owner, agent or manager of the mine, or any of them, may be proceeded against, jointly or separately, and may be convicted of such offence, but neither the owner nor the agent nor the manager shall be so convicted if he proves that the offence was committed without his knowledge or consent, and that he had caused notices of the said sections to be posted up, and to be kept posted up, at some conspicuous place at or near the entrance to the mining work. 1961-62, c. 81, s. 166, *amended*. Proceedings where persons employed contrary to Act

MEDICAL EXAMINATIONS

Interpre-
tation

167.—(1) In this section,

- (a) “applicant” means a person who is not the holder of a certificate in good standing who is seeking employment in a dust exposure occupation;
- (b) “certificate” means an initial certificate, an extended certificate, an endorsed certificate, a miner’s certificate or a renewed certificate;
- (c) “dust exposure occupation” means,
 - (i) employment underground in a mine,
 - (ii) employment at the surface of a mine, other than at a pit or quarry, in ore or rock crushing operations where the ore or rock is not crushed in water or a chemical solution,
 - (iii) employment at other locations, as designated by the chief engineer, at the surface of a mine or in a pit or quarry;
- (d) “endorsed certificate” means an initial certificate or extended certificate that has been endorsed under clause *b* of subsection 7;
- (e) “extended certificate” means an initial certificate that has been extended under clause *a* of subsection 7;
- (f) “initial certificate” means a certificate issued to an applicant under subsection 6;
- (g) “medical officer” means a medical officer appointed under *The Workmen’s Compensation Act* to carry out the provisions of this Act with regard to the examination of employees or applicants for employment;
- (h) “miner’s certificate” means a certificate issued under subsection 8;
- (i) “renewed certificate” means a miner’s certificate that has been renewed under subsection 9.

R.S.O. 1960,
c. 437

- (2) No person shall be employed in a dust exposure occupation unless he is the holder of a certificate in good standing. Employment in dust exposure occupation
- (3) Subject to subsection 4, every certificate remains in force for not more than twelve months, except that a medical officer may at any time recall the holder of a certificate for examination within the scope of the existing certificate and may extend, endorse, renew or cancel the certificate in accordance with his finding upon the examination. Term of certificate
- (4) In those parts of Ontario where the examinations under subsections 6 to 9 are conducted by a travelling medical officer, no certificate shall be deemed to have expired because of the failure of the medical officer to conduct an examination prior to the date of expiration of a certificate, and the holder of a certificate that would otherwise have expired shall present himself before a medical officer for re-examination at the first opportunity available after the date upon which his certificate would have so expired. Examination by travelling medical officer
- (5) Where a certificate of a person employed in the mining industry has expired because of the failure of its holder to present himself to a medical officer for examination, a medical officer may extend, endorse or renew the certificate or issue a miner's certificate, as the circumstances of the case require, if he is satisfied that the failure was caused by the inability of the holder to so present himself because of illness or other circumstances beyond his control. Expiration of certificate
- (6) Every applicant shall be examined by a medical officer before commencing employment, and, if the medical officer finds upon examination that the applicant is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall issue to the applicant an initial certificate. Examination before employment
- (7) The holder of an initial certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from disease of the respiratory organs and otherwise fit for employment in a dust exposure occupation, he shall, Initial certificate holder, re-examination
- (a) in the case of a holder who since the issuance of his initial certificate has completed less than eleven months employment in a dust

exposure occupation, extend the certificate for such period as he deems necessary to permit the holder to complete twelve months employment in a dust exposure occupation, and he may from time to time extend the certificate for the same purpose; and

- (b) in the case of a holder of an initial certificate who since the issuance of his initial certificate has completed eleven months or more employment in a dust exposure occupation, endorse the certificate.

Issue of
miner's
certificate

- (8) The holder of an endorsed certificate who since the endorsement of his initial certificate has completed eleven months or more employment in a dust exposure occupation shall, prior to its expiration, present himself to a medical officer for examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall issue him a miner's certificate.

Miner's
certificate
holder, re-
examination

- (9) The holder of a miner's certificate shall, prior to its expiration, present himself to a medical officer for re-examination, and, if the medical officer finds upon examination that the holder is free from tuberculosis of the respiratory organs, he shall renew the certificate, which may be further renewed from year to year upon the passing of a similar examination.

Unemployed
holder of
certificate

- (10) The holder of a certificate who for any reason is out of employment in a dust exposure occupation may apply to a medical officer for the extension, endorsement or renewal of his certificate or for the issuance of a miner's certificate, as the case may be, and, upon presentation of the holder's certificate, the medical officer shall conduct the required examination and effect such extension, endorsement, renewal or issuance as is warranted by his findings upon the examination.

Holder of
initial or
extended
certificate

- (11) Where the holder of an initial or extended certificate has been out of employment in the mining industry for a period exceeding one year and during such period has failed, through neglect on his part, to have his certificate extended or endorsed, such certificate is void and its holder is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only.

- (12) Where the holder of an endorsed certificate or ^{Holder of endorsed or miner's certificate} miner's certificate has been out of employment in the mining industry for a period exceeding two years and during such period has failed, through neglect on his part, to obtain a miner's certificate or to have a miner's certificate renewed, his certificate is void and the holder thereof is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only.
- (13) Where the holder of a certificate has been out of ^{Where unemployment exceeds three years} employment in the mining industry for a period exceeding three years, he is eligible for re-employment in a dust exposure occupation in the capacity of an applicant only.
- (14) The manager or superintendent of the mine at which ^{Custody of certificate} the holder of a certificate is employed may require the certificate to be delivered to and left in the custody of the manager or superintendent during the period of the holder's employment at the mine, but the certificate shall be returned to the holder upon the termination of his employment at the mine.
- (15) The chief engineer may exempt from subsections 2 ^{Exemption} to 14 any mine or any person employed thereat where, in his opinion, the mine does not contain silica in quantity likely to produce silicosis or where for any other reason he is of the opinion that such subsections should not apply.
- (16) Subsections 2 to 14 do not apply to a person usually ^{Idem} employed in a dust exposure occupation for less than fifty hours in each calendar month.
- (17) The Lieutenant Governor in Council may make ^{Regulations} regulations,
- (a) prescribing the nature of the examination to be made by a medical officer under subsections 6 to 11;
 - (b) prescribing the forms of certificates and extensions, endorsements and renewals thereof;
 - (c) generally for the better carrying out of this section. 1961-62, c. 81, s. 167.

REHABILITATION OF TAILINGS DISPOSAL AND PLANT AREAS

- 168.—(1) (a) The mine manager shall plant and maintain vegetation, or otherwise stabilize the tailings areas which will not be required for future impoundment of tailings to the satisfaction of the district engineer of mines.
- (b) At least one year prior to cessation of operation, the mine manager shall submit to the district engineer of mines, two copies of a plan showing,
- (i) the extent of the tailings area on which planting of vegetation or stabilization must still be completed,
 - (ii) the rehabilitation that is to be done in the mine or plant area, together with descriptive information.
- (c) The rehabilitation work mentioned in clause *b* shall be completed to the satisfaction of the chief engineer of mines.
- (d) A bond or security deposit in an amount deemed necessary by the chief engineer of mines to complete the rehabilitation mentioned in clause *b* shall be deposited with the Department of Mines.

Protection
of unused
workings

- (2) (a) Where a mine has been abandoned or where the work in it has been discontinued, the owner or lessee or any other person interested in the mineral of the mine shall cause the top of any shaft or raise opening to the surface to be solidly bulkheaded with reinforced concrete at bedrock or on top of the concrete collar of such opening, except that where in the opinion of the district mining engineer this is impracticable, the requirements of clause *b* apply.

All other
openings
and pits

- (b) All other openings and pits, dangerous by reason of their depth or other conditions, shall be and shall be kept securely fenced or otherwise protected against inadvertent access to the satisfaction of the district mining engineer, but where in his opinion the mine or workings present no greater hazard than the

natural topographic features of the area, this provision need not be complied with. 1961-62, c. 81, s. 168 (1), *amended*.

- (c) Every such person who, after notice in writing from the district mining engineer, fails to comply with his directions as to such fencing or protection within the time specified in the notice is guilty of an offence against this Act. Failure to erect fence after notice
- (d) Where the district mining engineer finds that any such fencing or protection is required in order to avoid danger to health or property, he may cause the work to be done and may pay the costs incurred out of any moneys provided for the purposes of this Act, and the amount of such costs with interest thereon is a lien upon the mine or mining work of which notice in such form as the Minister prescribes may be registered in the proper registry or land titles office, and no further transfer or other dealings with the mine or mining work shall take place until such amount is paid. When engineer may erect fence
- (e) The amount of such costs with interest thereon is due from the owner or lessee to the Crown and is recoverable at the suit of the district mining engineer in any court of competent jurisdiction. Recovery of costs of work
- (f) Notwithstanding clauses *d* and *e*, the Minister, either without payment or on such terms and conditions as he deems proper, may cause a cessation of charge to be registered in the proper registry or land titles office, and thereupon the lien registered under clause *d* is void and of no effect. 1961-62, c. 81, s. 168 (2-5), *amended*. Discharge of fencing liens

RESPONSIBILITY AS TO PROVISIONS

- 169.—(1) The owner or agent of an operating mine or plant shall appoint a manager who is responsible for the control, management and direction of the mine or plant. 1961-62, c. 81, s. 170 (5), *amended*. Responsibility as to carrying out requirements
- (2) The owner or agent shall provide the manager of a mine or plant with the necessary means and shall afford him every facility for complying with this Part. 1961-62, c. 81, s. 170 (8), *amended*. Owner to give facilities to manager to comply
- (3) Subject to the requirements of this Act and except as otherwise provided in this Act, responsibility for Responsibility as to qualifications

the authorization and decisions as to the qualifications of employees rests with the employer or his agent. 1961-62, c. 81, s. 161.

Manager's
absence

- (4) The manager of an operating mine or plant shall appoint one or more suitable persons who are responsible, during the manager's absence, for taking all necessary and reasonable measures to enforce the requirements of subsection 7. 1961-62, c. 81, s. 170 (6, 7), *amended*.

Duty as to
knowledge
of
requirements

- (5) It is the duty of every manager, supervisor or other person in charge of workmen and every hoistman, deckman, conveyance attendant or person who handles explosives or blasting agents or who operates, installs or maintains any equipment, machinery or electrical apparatus in or about a mine or plant, to know the requirements of this Part that apply to the work under his charge and direction or in which he is engaged. 1961-62, c. 81, s. 173 *amended*.

Manager,
etc., to
enforce
requirements

- (6) Except as to any provisions that the chief engineer has directed are not applicable thereto,

the manager of the mine or plant shall take all necessary and reasonable measures to enforce the provisions of this Part and to ensure that they are observed by every employee of the mine or plant, and every supervisor shall take all necessary and reasonable measures to enforce the requirements of all such provisions as are applicable to the work over which he has supervision and to ensure that they are observed by the persons under his charge and direction. 1961-62, c. 81, s. 170 (6).

Manager
may make
rules

- (7) The manager of a mine or plant may make rules not inconsistent with any provision of this Part or any special direction made by an engineer as herein provided for the maintenance of order and discipline and the prevention of accidents in or about the mine or plant, and may submit any rule so made to the chief engineer who shall lay the rules before the Minister for his approval, and, upon such approval being given, the rules take effect after they have been posted up in a conspicuous place at the mine for at least fourteen days, but the Minister may disallow any of such rules or direct such changes to be

made in them as he deems proper. 1961-62, c. 81, s. 170 (3), *amended*.

- (8) Every such rule, after approval and when and so long ^{Offence} as it is posted up and is legible, has the same force and effect as the provisions of this Act, and any person who contravenes any such rule is liable to the penalty provided for a breach of the provisions of this Act. 1961-62, c. 81, s. 170 (4).
- (9) (a) Where the owner, agent or manager of a mine ^{Suspension of provision} or plant, by an application in writing stating the reasons therefor, requests the engineer to suspend any of the requirements of sections 173 to 596 as to such mine or plant, the chief engineer may in writing direct that the requirements of any such provision do not apply to such mine or plant, or may in writing direct that any such provision does not apply so long as such limitations and conditions as he sees fit to impose are observed or complied with. 1961-62, c. 81, s. 170 (1), *amended*.
- (b) The owner, agent, or manager shall forthwith ^{Idem} post in a prominent place a copy of the chief engineer's suspension and the terms and requirements thereof, so that any such suspension may be drawn to the attention of the employees affected. *New*.
- (10) The chief engineer may at any time cancel any order ^{Cancellation of suspension} made under clause *a* of subsection 9 or make such alterations therein as he deems proper in view of any change in the conditions under which the order was made or upon it appearing to him that such change is advisable for any other reason. 1961-62, c. 81, s. 170 (2).
- (11) Every person who is engaged exclusively in super- ^{Knowledge of English language} vising the work of other persons at a mine or plant shall be able to give and to receive and understand orders in the English language.
- (12) Every person in charge as a deckman, conveyance ^{Idem} attendant or hoistman at a mine or plant shall have a knowledge of the English language adequate to enable him to carry out his duties in a thoroughly safe manner. 1961-62, c. 81, s. 173, *amended*.

Lifting
safely

- (13) No owner, agent or manager shall require a person to lift, carry or move anything so heavy or in such manner as to be likely to endanger his safety or the safety of any other person in a mine or plant. *New.*

Adequate
training
for
employee

- (14) Every manager shall ensure that no person works without supervision at any machine unless the person,
- (a) has received adequate training and instruction in the operation of the machine and any dangers connected therewith;
 - (b) has received adequate supervision by a person having thorough knowledge and experience with the machine; and
 - (c) is capable of safely operating the machine without supervision.

Operation of
machines
and devices

- (15) No manager, supervisor or his agent who has reasonable cause to believe that any machine or device in or about a mine or plant is unsafe or in contravention of this Act shall cause or permit it to be used or operated.

Idem

- (16) No person who has reasonable cause to believe that any machine or device, which has been assigned to him for use in or about a mine or plant, is unsafe or in contravention of this Act shall use the machine or device until he has,

- (a) reported the defect to his supervisor; and
- (b) obtained specific instructions in writing from his supervisor to use or operate the machine or device.

Idem

- (17) No person shall use or operate any machine or device in or about a mine or plant in an unsafe manner or in a manner that does not comply with this Act.

Boisterous
conduct

- (18) No person in a mine or plant shall engage in any contest, feat of strength, unnecessary running or rough or boisterous conduct that is likely to endanger the safety of any person. *New.*

Responsi-
bility of
contractors,
etc.

- (19) Where work in or about a mine or plant is let by the owner, agent or manager to a contractor,

- (a) the owner, agent or manager shall, except for work involving surface prospecting, give written notice to the chief engineer and to the district mining engineer, resident in that part of Ontario in which the mine or plant is situated that a contract has been made;
 - (b) the contractor shall give written notice to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine is situated of any sub-contract that has been made;
 - (c) the contractor or a subcontractor, as the case may be, shall appoint a person to be in charge and responsible for the work being done by the contractor or the subcontractor;
 - (d) the person so appointed by the contractor or the subcontractor shall comply and enforce compliance with all the provisions of this Part pertaining to the work over which he has control and is, in any case of non-compliance therewith, guilty of an offence and punishable in like manner as if he were the owner, agent or manager. 1961-62, c. 81, s. 170 (9), *amended*.
 - (e) where the prime contractor has two or more subcontractors working on a project on surface, the prime contractor shall,
 - 1. Appoint a person to have authority to enforce compliance with all the provisions of this Part on all the work of the project.
 - 2. Provide and maintain first-aid requirements in accordance with regulations under *The Workmen's Compensation Act, New*. R.S.O. 1960, c. 437
- 170.—(1) Every person employed at a mine or plant shall take all necessary and reasonable measures to carry out his duties in accordance with such provisions as are applicable to the work in which he is engaged. Measures to be taken
- (2) Every person through whose neglect or wrongful act a contravention occurs at a mine or plant shall be deemed to have incurred the penalties provided for a breach of the provisions of this Part. *New*. Incurring penalties

REQUIREMENTS

Require-
ments

171. Subject to sections 169 and 170, sections 173 to 596 shall be observed and carried out at every mine and plant. 1961-62, c. 81, s. 171, *amended*.

Interpre-
tation

172. In sections 173 to 596,

- (a) "blasting agent" means a type of explosive of low sensitivity that cannot, as mixed and packaged for use, be detonated by a single No. 8 detonator, and, unless specified, the requirements for explosives do not apply to a blasting agent;
- (b) "boatswain's chair" means a suspended scaffold in the form of a seat used by one person in a sitting position and supported by slings attached to a suspended rope, and includes the wearing of a safety belt by the person;
- (c) "charge" means,
 - (i) explosives and a detonator,
 - (ii) a blasting agent and a detonator, or
 - (iii) a blasting agent and a detonator and primer that is exploded as a single unit;
- (d) "drum hoist" means the type of hoist that spools the rope on the hoist drum;
- (e) "explosives" includes detonators and those powders that are cap sensitive with a single detonator as packaged for use, and includes black blasting powder;
- (f) "fire-resistive" when applied to buildings, structures or parts thereof, means constructed in an approved manner of steel, masonry, reinforced concrete, or other equivalent materials, or any combination of such materials;
- (g) "friction hoist" means the type of hoist where the rope is driven by the friction between it

and the drum tread and where the rope is not spooled on the hoist drum but passes over or around it;

- (h) "safety belt" means a belt worn round the waist of a person and includes the rope and necessary fittings attached to the belt, which shall be suitable for their purpose, and the safety belt shall be of sufficient strength to absorb twice the load of energy which, under the circumstances of its use, could be transmitted to it;
- (i) "safety harness" means a combination of a belt worn round the waist of a person and straps attached to the belt and passing over the person's shoulders, with the necessary rope fittings and assembly that meets the strength requirements of a safety belt and is suitable for raising the person by the rope without permitting the body of the person to bend at the waist;
- (j) "shot" means the sound of a charge or charges being exploded;
- (k) "therm-hour" means 100,000 British thermal units per hour or 39.3082 brake horse-power;
- (l) "utility hoist", including "tugger hoist" other than a hoist designated as a "construction hoist", means a powered hoist used for handling materials only in or about a mine or plant, and the safety requirements may be designated by the district electrical-mechanical engineer according to the conditions of use,

and the decision of an engineer as to whether or not a situation complies with a requirement therein in which "suitable", "adequate", "approved", or any expression of like import, is used and as to the meaning and application of any such expression is final and conclusive, and a certificate of any such decision signed by the engineer may be used as evidence in any court. 1961-62, c. 81, s. 172, *amended*.

PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

Safety
hats and
footwear

173.—(1) An approved safety hat and approved safety footwear shall be worn by every person employed,

(a) underground in a mine;

(b) in a location in a pit or quarry designated by the district mining engineer.

Designated
areas for
protective
equipment

(2) The manager shall designate such other areas or occupations and circumstances where any or all of the following items shall be worn by every person employed therein:

1. Approved safety hat.

2. Approved safety footwear.

3. Approved eye protective equipment.

4. Approved hearing protective equipment.

5. Approved breathing apparatus.

6. Any other approved personal protective equipment which the job in question may require.

Hearing
protection

(3) The manager shall ensure that all steps practicable are taken to prevent injury to the hearing of a person from excessive noise.

Masks,
respirators,
etc.

(4) Where applicable, masks or respirators of an approved type and design for the hazard involved shall be worn by persons who are exposed to dust, gases, or irritating and dangerous fumes.

Idem

(5) Every person shall properly maintain his mask or respirator.

Idem

(6) Emergency breathing apparatus, where required, shall be maintained in condition for immediate use, and,

(a) the manager shall designate a responsible person to regularly inspect, sterilize and perform any necessary maintenance on such apparatus; and

(b) such apparatus, when not in use, shall be stored in a dust-tight container.

- (7) There shall be provided and maintained in safe ^{Safety belts, etc.} condition safety belts or safety harnesses for the use of persons where necessary.
- (8) Every person shall properly maintain his safety belt ^{idem} or safety harness.
- (9) Every person employed at a mine or plant shall, ^{Duty to wear safety equipment}
 - (a) use or wear the personal protective clothing and equipment required by this Part; and
 - (b) properly maintain his personal protective clothing and equipment. *New.*

FIRE PROTECTION — MINES

- 174. Sections 175 to 195 and sections 559 to 563 apply at ^{Application of ss. 175-195 and ss. 559-563} mine operations underground and in the vicinity of shaft collars. *New.*
- 175.—(1) General procedure to be followed both on sur- ^{Procedure} face and underground in case of fire underground or in a mine plant building that may endanger the mine entrance shall be drawn up, and all persons concerned shall be informed and kept informed of their duties.
- (2) Copies of the procedure or suitable excerpts shall be ^{Posting} kept posted in the shafthouse and other prominent places. 1961-62, c. 81, s. 174 (1, 2).
- (3) A test of the effectiveness of such procedure shall be ^{Tests} made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 174 (4), *amended.*
- 176.—(1) Every mine worked from shafts or adits pro- ^{Stench warning} ducing over 100 tons of ore per day and such other mines as are designated by the district mining engineer shall be equipped with an approved apparatus for the introduction into the mine workings of ethyl mercaptan or other warning gas or material approved by the chief engineer, and such apparatus shall be available at all times in a suitable location and kept ready for instant use for the purpose of warning persons underground of any emergency necessitating a speedy evacuation of the workings.

- Idem (2) A test of the effectiveness of the warning and procedure described in subsection 1 shall be made at least once a year and a report of the effectiveness of the test shall be made available to the district mining engineer. 1961-62, c. 81, s. 175 (1, 2), *amended*.
- Idem (3) Every person employed underground shall have the meaning of the warning explained to him, and he shall be acquainted with the smell of the warning gas. *New*.
- Flammable refuse 177.—(1) No flammable refuse shall be allowed to accumulate underground but shall be removed from the workings at least once a week and brought to the surface and there disposed of in a suitable manner. 1961-62, c. 81, s. 176 (1).
- Idem (2) No flammable refuse shall be allowed to accumulate in or about a headframe, shafthouse or any plant building in which a fire may endanger the mine entrance.
- Idem (3) Suitable fire-resistive containers for the temporary disposal of flammable refuse such as scrap paper, oily waste, rags and other similar materials shall be provided at all shaft stations, underground shops, lunch rooms and enclosures necessary for the housing of machinery or equipment or stores and buildings mentioned in subsection 2, and such containers shall be regularly emptied. 1961-62, c. 81, s. 176 (2, 3), *amended*.
- Unused timber (4) All timber not in use in a mine shall, as soon as is practicable, be taken from the mine and shall not be piled up and permitted to decay therein.
- Certificate as to flammable refuse (5) Every shift boss or mine captain shall certify in writing to the mine manager at least once a week that there is no accumulation of flammable refuse underground in the area under his supervision except as reported by him.
- Storage of oil and grease (6) Oil, grease or other flammable material shall not be stored in a shafthouse or portalhouse, but it is permissible, if adequate precautions are taken, to have in the shafthouse or portalhouse, for distribution only, an amount not exceeding the requirements for one day's operation.

- (7) Volatile, flammable liquids shall not be stored in a shafthouse or portalhouse and such material shall be transported underground only in approved types of containers. Volatile, flammable liquids
- (8) Oil, grease or volatile flammable liquid while underground shall be contained in suitable metal receptacles, and the amount of oil or grease so kept underground shall not exceed the requirements for seven days and the amount of volatile flammable liquid kept underground shall not exceed the requirements for the current day's work. 1961-62, c. 81, s. 176 (4-8). Oil and grease underground
- (9) The transfer of liquid fuels from one container to another by the direct application of air under pressure shall not be permitted, except where properly designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 194 (3). Idem
178. No person shall build, set or maintain a fire underground for any purpose unless he has proper authority and suitable instructions for so doing, and only after the necessary fire-fighting equipment has been provided. 1961-62, c. 81, s. 177. Building fires prohibited
179. Where open-flame lights are used at a mine not equipped with a headframe and shafthouse or portalhouse constructed of fire-resistive materials, the interior of the shafthouse or portalhouse shall be tightly sheeted with metal or a suitable fire-resistive material to a height of eight feet. 1961-62, c. 81, s. 178. Open-flame lights, precautions
180. All underground shops, lunch rooms and buildings or enclosures necessary for the housing of machinery, equipment and stores shall be constructed of fire-resistive material and so located and maintained as to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 179. Underground structures
- 181.—(1) If the engineer is of the opinion that a fire hazard may be created at a mine by smoking, or by the use of open-flame lamps, matches, or other means of producing heat or fire, he may designate the mine or part or parts of the mine as a fire hazard area. Fire hazard areas
- (2) No person shall smoke or be allowed to smoke, use open-flame lamps, matches or other means of producing heat or fire in such areas except with the permission in writing of the engineer and under such conditions as he deems proper. Idem

- Idem (3) Such fire hazard areas shall be properly identified by suitable warning signs. 1961-62, c. 81, s. 180 (1-3).
- Idem (4) The manager shall cause such signs to be installed and maintained as long as the area is so designated. 1961-62, c. 81, s. 180 (4), *amended*.
- When flammable gas encountered in mine 182. When a flammable gas in dangerous concentrations has been found to exist in a mine working, such working or the parts of such working concerned shall immediately be considered a fire hazard area, and every precaution shall be taken while clearing the area or doing any work therein to prevent ignition of the gas and these precautions shall be continued as long as the hazard exists. 1961-62, c. 81, s. 181.
- Fire-fighting equipment 183.—(1) Suitable fire-fighting equipment shall be provided and maintained in or about every headframe, shafthouse, portalhouse and every plant building in which a fire may endanger the mine entrance and at every shaft or winze station underground. 1961-62, c. 81, s. 182 (1), *amended*.
- Idem (2) Suitable fire-fighting equipment shall be provided and maintained at all underground crushers, pump stations, tipples and underground electrical installations except where, in the opinion of the engineer, no fire hazard exists. 1961-62, c. 81, s. 182 (2).
- Idem (3) A properly authorized person or persons shall make a monthly inspection of all fire-fighting equipment referred to in subsections 1 and 2, and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3), *amended*.
- Storage of carbide 184.—(1) Calcium carbide shall be stored on the surface only, in a suitable, dry place, other than the shaft-house or portalhouse or changehouse, and in its original unopened container.
- Distribution of carbide (2) For the purpose of distributing calcium carbide, adequate provisions for the handling of quantities not in excess of one day's supply or 100 pounds, whichever is the greater, shall be made at every mine.
- Idem (3) Such distribution shall not take place in a shaft-house, portalhouse or changehouse unless such structure is fire-resistive but shall be provided for by the

installation of a suitable distribution centre not closer than fifty feet to the nearest point of any part of the headframe, shafthouse or portalhouse.

- (4) Adequate precautions shall always be taken to ensure that calcium carbide is handled in a safe manner and no calcium carbide shall be taken underground except in suitable containers. 1961-62, c. 81, s. 183. Handling
of carbide

185. Where operations involving the use of acetylene, kerosene, gasoline or other torches are conducted in a headframe, shafthouse, portalhouse or other building in which a fire may endanger the mine entrance or the underground workings of a mine, suitable measures for protection against fire shall be adopted and rigidly adhered to. 1961-62, c. 81, s. 184. Fire
protection
where
torches
used

- 186.—(1) Where cylinders of compressed gas, such as acetylene and oxygen, are transported underground for any cutting or welding operation, all fittings, such as regulators and manifolds, shall be disconnected from the cylinders and the valves shall be protected in a suitable manner. 1961-62, c. 81, s. 185. Under-
ground
trans-
portation
of
compressed
gases

- (2) Any such removable protective device shall be replaced at any time a cylinder is left unattended or before a cylinder is moved to a new location. 1961-62, c. 81, s. 185 (1, 2). Idem

- (3) In all cases where cylinders of compressed gas are operated from within any cage, skip or other shaft conveyance, or where the cylinders are set up in a location not readily accessible to the person operating the nozzle equipment, a second competent person shall be employed at all times to attend to the operation of the cylinder-control devices. 1961-62, c. 81, s. 185 (3), *amended*. Operation
of welding
and cutting
torches

- (4) In all cases where cylinders of compressed gas are used underground for the purpose of supplying cutting or welding equipment, special precautions shall be observed to avert the possibility of damage to or failure of the regulators, manifolds and hoses used in conjunction with the equipment. 1961-62, c. 81, s. 185 (4). Compressed
gas

187. No device for the generation of gas, such as acetylene for supplying cutting or welding equipment, shall be used in the underground workings of a mine. 1961-62, c. 81, s. 186. Generation
of gas
under-
ground
forbidden

Escapement exit	188.—(1) In every mine where a vertical or inclined shaft has been sunk or an adit driven and stoping has commenced, there shall be provided and maintained, in addition to the hoisting shaft or the opening through which persons are let into or out of the mine and the ore extracted, a separate escapement exit. 1961-62, c. 81, s. 187.
Location and cover of exit	(2) Such exit shall be outside any structure covering the main entrance to the mine and shall be isolated by a distance of not less than one hundred feet from the main entrance.
Idem	(3) Any structure covering such exit shall be of fire-resistive material and so constructed to reduce the fire hazard to a minimum. 1961-62, c. 81, s. 187 (1, 2), <i>amended</i> .
When necessary	(4) If such an escapement exit is not in existence at the time that stoping is commenced, work upon it shall be begun as soon as stoping is commenced and shall be diligently prosecuted until it is completed, and means of escapement, other than the main outlet of the mine, shall be provided to and connected with the lowest level on which stoping operations are being carried on.
Size of exit	(5) The escapement exit shall be of sufficient size to afford an easy passageway and, where necessary, shall be provided with good and substantial ladders from the deepest workings to the surface.
Monthly exit inspection	(6) The manager shall depute some competent person or persons to make an inspection of such escapement exit at least once a month.
Record of inspection	(7) A record of such inspection and the conditions found shall be made in writing by the person making it. 1961-62, c. 81, s. 187 (3-6).
Legible signs showing exits	(8) Legible signs showing the way to escapement exits shall be posted in prominent places underground and all persons employed underground shall be instructed as to the location of the escapement exits. 1961-62, c. 81, s. 187 (7), <i>amended</i> .
Buildings in proximity to mine entrance	189.—(1) Unless there is first provided a second means of exit from the mine workings, no building of other than fire-resistive construction shall be erected within fifty feet of any closed-in part of a headframe

or portalhouse, except that the fire-resistive building housing the hoist and power plant equipment may be erected within this distance so long as such distance is not less than thirty-five feet. 1961-62, c. 81, s. 188.

- (2) Where a hoist is located above the mine shaft, the supporting and enclosing structures shall be of fire-resistive material. *New.*
190. No steam boiler or diesel engine shall be installed in such a manner that any part thereof is within seventy-five feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 190. Location of boilers and diesel engines
 191. No gasoline or other internal combustion engine using highly volatile liquids or flammable gases shall be installed, serviced, garaged or stored in or within fifty feet of the building housing the hoist nor within 100 feet of the centre line of the collar of a shaft or other entrance to a mine. 1961-62, c. 81, s. 191, *amended.* Location of internal combustion engines
 - 192.—(1) Except for the actual fuel tanks of operating equipment, no storage of gasoline or liquid fuel shall be permitted within 100 feet of the collar of a shaft or other entrance of a mine. Storage of liquid fuels
(2) The natural drainage from such a location shall be such that the flow is in a direction opposite to the location of any such shaft or mine entrance. 1961-62, c. 81, s. 192. Idem
 - 193.—(1) Where practicable, there shall be a sufficient number of suitable fire doors installed underground to cut off the shaft and the mine openings directly associated with it from the other workings of the mine. 1961-62, c. 81, s. 195 (1), *amended.* Fire doors
(2) Fire doors shall be maintained in proper order and kept clear of all obstructions so as to be readily usable at all times. 1961-62, c. 81, s. 195 (2). Properly maintained
 194. Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may order refuge stations to be provided and maintained at such places in the mine as he directs, and every such refuge station shall have water, air and telephone connections to the surface and be separated from the adjoining workings by closeable openings so arranged and equipped that gases can be prevented from entering the refuge station. 1961-62, c. 81, s. 196, *amended.* Refuge stations

Connection
between
mines

195.—(1) Where the chief engineer deems it necessary or advisable for the protection of persons employed underground, he may recommend in writing to the Minister that a connection between mines be established at such places as he deems advisable and he may further recommend that such connection be so made and equipped as to constitute a refuge station or refuge stations. 1961-62, c. 81, s. 197 (1), *amended*.

Idem

(2) Upon the approval by the Minister of any such recommendation, a copy thereof, accompanied by a copy of this section, shall be served personally upon or sent by registered mail to the owner or the agent and the manager of each of the mines affected. 1961-62, c. 81, s. 197 (2).

Committee

(3) Upon the approval of such a recommendation of the chief engineer, the Minister may in writing signed by him direct each of the mining companies concerned to appoint a representative to act in its behalf on a committee under the chairmanship of a third party, who shall be a mining engineer recommended by the chief engineer and appointed to the chairmanship of the committee by the Minister, and the committee shall determine,

(a) the design, specifications and location of the connecting passages, bulkheads or other structures to be constructed in order to safeguard the present and future operations of the mines affected;

(b) the work to be done by each of the mines affected and the proportion in which the cost of the work and of establishing and maintaining the connection shall be borne by the owners or agents of the mines affected;

(c) the time at which the work in compliance herewith shall be commenced and completed;

(d) the proportion in which the costs and expenses of the committee shall be borne by the owners or agents of the mines affected; and

(e) such other provisions or requirements as in the premises they deem necessary or advisable. 1961-62, c. 81, s. 197 (3), *amended*.

- (4) The committee shall submit a report in writing to the Minister, and a report of the majority of the committee shall be deemed to be the finding of the committee. ^{Idem}
- (5) Upon the approval by the Minister of the report of the committee, the chief engineer may issue his order for the establishment and maintenance of such connection and refuge station or stations (if any are recommended) in accordance with the terms of the report. ^{Idem}
- (6) A copy of the report shall be attached to the order and forms a part thereof. ^{Idem}
- (7) No such order is subject to appeal upon any ground whatsoever and is enforceable in the same manner as any order of the chief engineer. 1961-62, c. 81, s. 197 (3-7). ^{Idem}

FIRE PROTECTION — PLANTS

- 196.—(1) Suitable fire-fighting equipment shall be provided and maintained in or about every plant building. 1961-62, c. 81, s. 182 (1), *amended*. ^{Fire-fighting equipment}
- (2) Procedures for fighting fire in plant buildings shall be drawn up and suitable signs pertaining to and excerpts from the procedures shall be kept posted in prominent places. 1961-62, c. 81, s. 174 (3), *amended*. ^{Idem}
 - (3) A properly authorized person or persons shall make a monthly inspection of all fire-fighting equipment and shall make a report in writing to the manager stating that such examination has been made and certifying as to the conditions found. 1961-62, c. 81, s. 182 (3). ^{Idem}
- 197.—(1) Where an internal combustion engine is installed at a plant, provision shall be made for safely conducting the exhaust of such engine to a point well outside the building. 1961-62, c. 81, s. 192 (1), *amended*. ^{Exhaust of internal combustion engines}
- (2) The exhaust shall be so arranged as to avert the possibility of fumes re-entering the building or entering the intake of an air compressor or contaminating the atmosphere of any adjacent buildings or mine workings. 1961-62, c. 81, s. 192 (2). ^{Idem}

Transfer of
liquid
fuel

198.—(1) The fuel tanks of an internal combustion engine installed in a building shall be so arranged that the actual transfer of fuel to the fuel tank takes place at a point outside the building and the fuel is conducted to the tank in a tightly-jointed pipe or conduit.

Idem

(2) Similar provisions for the escape of displaced air from the fuel tank shall be made whereby the displaced air will be conducted to a safe point outside the building before being discharged into the atmosphere. 1961-62, c. 81, s. 194 (1, 2).

Dangerous
materials

199. Any dangerous, flammable or explosive material or substance in a solid, liquid or gaseous state or any combination of them, other than manufactured explosives and blasting agents, that is kept, stored or handled, in a plant,

(a) shall be kept in a container that is suitable having regard to the nature and state of the material or substance; and

(b) shall be kept apart or insulated from any reasonably foreseeable source of ignition or from temperatures likely to cause combustion,

and where the material or substance is kept, stored or handled for a purpose other than immediate use, it shall be kept, stored or handled,

(c) outside any building;

(d) in a building not used for any other purpose;
or

(e) in a fire-resistive compartment satisfactory to the district mining engineer as to location and construction. *New.*

Exits

200.—(1) All plant buildings, except those used for the storage of explosives and blasting agents, shall be provided with adequate and properly maintained means of egress, convenient to and having easy communication with all rooms, regularly occupied by a person, including,

(a) tower stairs of fire-resistive construction equipped with fire-resistive doors and hardware, satisfactory to an engineer, at each storey including the basement; and

- (b) where permitted by an engineer, metal or other non-combustible fire escapes consisting of exterior stairways with railings and with landings at each storey connecting directly with the interior of the building through metal or other fire-resistive doors.
- (2) No means of egress from a plant building shall be obstructed and no door to a fire escape, tower stair or other smoke-proof enclosure shall be prevented from closing or remaining closed. ^{Idem}
- (3) Notwithstanding that a door is locked to prevent ingress to a building or room, the door shall be deemed to be not locked, bolted or barred if it is provided with a mechanism for unlocking it quickly from the inside that requires no special skill, effort or previous knowledge for its operation. *New.* ^{Idem}

201. Where,

Dangerous
material

- (a) any grinding, polishing, screening or other process is likely to produce dust or other particles of such size or character and to such an extent as to be capable of producing a flammable mixture; or
- (b) any mixing, handling, dispensing or storage of any material is likely to produce a gas, vapour or mist of such character and to such extent as to be capable of producing a flammable mixture,

all practicable steps shall be taken to,

- (c) enclose the equipment used in the process;
- (d) prevent or remove any accumulation of dust, vapour, gas or mist that may escape from the enclosure;
- (e) exclude or effectively enclose all potential sources of ignition of the flammable mixture;
- (f) restrict the spread and effects of any burning or explosion by the provision of vents, baffles and chokes or other devices satisfactory to an engineer; and

- (g) when so directed by an engineer create and maintain an inert atmosphere in contact with dust or other particles mentioned in clause *a* or mixed with the gas, vapour or mist mentioned in clause *b*. *New*.

AID TO INJURED

Stretchers

- 202.—(1) At every mine or plant, there shall be maintained a sufficient number of properly-constructed stretchers for the proper handling and transporting of persons who are injured.

First aid supplies

- (2) There shall be provided and maintained at every mine or plant, for the treatment of any person injured, such personnel, equipment and vehicles and such first-aid supplies as are required by the regulations under *The Workmen's Compensation Act*. 1961-62, c. 81, s. 198, *amended*.

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ENVIRONMENTAL CONDITIONS

SANITATION — MINES

Sanitary
con-
veniences,
mines

203. There shall be provided in the workings of a mine suitable sanitary conveniences in accordance with the following requirements:

1. Where persons are employed underground, one sanitary convenience for every twenty-five persons or portion thereof on any shift.
2. The sanitary conveniences mentioned in item 1 shall be conveniently placed, having regard to the number of persons employed on the different levels, in a well-ventilated part of the mine.
3. Where persons are employed at an open pit or a clay, sand or gravel pit or quarry, one sanitary convenience and one urinal for every twenty-five persons or portion thereof on any shift.
4. The sanitary conveniences mentioned in items 1 and 3 shall be kept clean and sanitary and the content disposed of regularly. 1961-62, c. 81, ss. 206, 207, *amended*.

Idem

204. Any person depositing faeces in any place underground, other than in a sanitary convenience provided, is guilty of an offence against this Act. 1961-62, c. 81, s. 208.

Drinking
water

- 205.—(1) A supply of potable water shall be provided in mine workings on surface and at points underground

reasonably accessible to the working places. 1961-62,
c. 81, s. 209, *amended*.

- (2) All locations where a supply of potable water is provided shall be kept in a clean and sanitary condition. ^{Idem}
 - (3) (a) The manager shall provide underground, where more than fifteen persons congregate to eat, an area or places sufficiently large to accommodate all such persons. ^{Lunchrooms}
 (b) Every such area or place shall be adequately heated and ventilated and shall be provided with an adequate supply of warm water, soap and paper towels. ^{Idem}
 - (4) All supplied potable water in a mine shall be governed by the standard of drinking water objectives set by the Ontario Water Resources Commission. ^{Standard of drinking water}
 - (5) Wherever, at a pit or quarry, the facilities referred to in subsection 1 of section 206 are located at a distance from the place of work, adequate transportation shall be provided. ^{Transportation to washing facilities} *New*.
- 206.—(1) If persons are employed underground or in hot or dusty occupations on surface at a mine, suitable and sufficient accommodation, including supplies of clean, cold and warm water for washing themselves, shall be provided above-ground near the principal entrance of the mine to enable such persons to conveniently dry and change their clothes. ^{Dressing rooms}
- (2) Such accommodation, unless of fire-resistive construction, shall not be nearer than fifty feet to a shafthouse or portalhouse and it shall not be located in a hoistroom or boilerhouse unless a separate, properly-constructed room is provided. 1961-62, c. 81, s. 210, *amended*. ^{Idem, location}

SANITATION — PLANTS

- 207.—(1) There shall be provided in every plant suitable, separate wash and toilet rooms for male and female persons that are conveniently accessible and in accordance with the following requirements: ^{Sanitary conveniences, plants}
1. Where fewer than six persons are employed, a room containing a wash basin and a flush toilet and having a door that has a locking device on the inside.
 2. Where six or more persons are employed, there shall be provided for the number of

employees of each sex in a group itemized in column 1 of the Table not less than the number of separate flush toilets and separate wash basins for each sex opposite thereto in column 2.

TABLE

Item	COLUMN 1		COLUMN 2	
	No. of male Employees	No. of female Employees	No. of	
			Toilets	Wash-basins
1	1 to 9	1 to 9	1	1
2	10 to 24	10 to 24	2	2
3	25 to 49	25 to 49	3	3
4	50 to 74	50 to 74	4	4
5	75 to 100	75 to 100	5	5
6	Over 100	Over 100	Add one toilet and one wash basin for each additional thirty employees or fraction thereof.	

3. Notwithstanding item 2,

- i. in toilet rooms for more than nine male employees, urinals shall be substituted for not less than one-quarter and not more than one-half of the number of flush toilets required by item 2, or
- ii. in toilet rooms for more than nine female employees, urinals may be substituted for not more than one-half of the number of flush toilets required by item 2.

4. Subject to item 3, urinals or wash fountains in straight trough form and wash fountains in circular form may be provided in lieu of toilets or wash basins, as the case may be, and,

- i. where a circular wash fountain is provided, each twenty inches of its circumference is deemed to be the equivalent of one wash basin, and
- ii. where a urinal or wash basin in straight trough form is provided, each twenty-

four inches of its length is deemed to be the equivalent of one toilet or one wash basin, as the case may be.

- (2) Where wash fountains or wash basins are provided, ^{Wash basins} they shall be supplied with hot and cold water from taps or outlets that are satisfactory to an engineer.
- (3) Water for washing purposes, ^{Hot water}
 - (a) shall not exceed 140° Fahrenheit at any outlet; and
 - (b) shall not be mixed directly with steam.
- (4) Where the municipality in which the plant is located ^{Where privies permissible} is not serviced by a water or sewage system and flush toilets cannot be provided, privies or other toilets satisfactory to an engineer shall be provided.
- (5) Every toilet for employees and every urinal for ^{Requirements for toilets} female employees shall occupy an individual compartment with a suitable door and lock and the compartment shall have a length of not less than four feet six inches and a width of not less than two feet eight inches.
- (6) The height of any compartment door, wall or partition ^{Idem} between toilets for employees and between urinals for female employees may be less than the height of the room but the top of the door or partition shall be not less than five feet six inches from the floor and the bottom not more than one foot from the floor.
- (7) Every compartment shall be supplied with a clothes ^{Idem} hook.
- (8) Every toilet room and washroom shall be adequately ^{Lighting} lighted and kept in good repair and in a sanitary condition.
- (9) Toilets, urinals and other sanitary conveniences shall ^{Repair} be kept in good repair and in a sanitary condition.
- (10) Toilet rooms and washrooms shall, ^{Requirements for toilet rooms and washrooms}
 - (a) have legible signs indicating for which sex the room is provided and be constructed so as to prevent a view of the facilities from outside

the room and so as to prevent, as far as is practicable, accidental entry into the room by a person of the opposite sex;

- (b) have provided and maintained for the use of persons a convenient and sufficient supply of clean towels or suitable air dryers, soap or other suitable cleansing agent, toilet paper and in each toilet room used by females a suitable covered receptacle;
- (c) be, where separated, adjacent and connected with a door or doorway;
- (d) have a ceiling height of not less than eight feet with the enclosing walls extended to the ceiling and constructed of material impervious to liquid to a height of not less than four feet;
- (e) have mechanical exhaust to the outdoors at a volume of not less than two cubic feet per minute for each square foot of the floor area of the room, or that have windows or skylights so constructed that, for each toilet and for each urinal in the room, not less than two square feet of the window or skylight can be opened;
- (f) have an opaque window or skylight where necessary to ensure privacy;
- (g) have smooth floors of terrazzo, vitrified tile, mastic tile, asphalt or other equally non-absorbent, easily cleaned material. *New.*

Drinking
water

208. There shall be provided:

1. A supply of potable water in a place where the tap or outlet is distant from any sanitary convenience and, where the supply is not taken directly from a water pipe, the supply shall be contained in a covered vessel having a drain faucet and shall be renewed at least daily.
2. Where the potable water is not delivered in an upward jet from which the employees can

conveniently drink, a sufficient supply of individual drinking cups located near the tap or outlet.

3. Except where otherwise permitted by an engineer, at least one tap or outlet for drinking water on every floor where work is regularly performed and within 300 feet of every employee's normal work station.
4. All supplied potable water in a plant shall be governed by the standards of drinking water objectives set by the Ontario Water Resources Commission. *New.*

209. There shall be provided:

Change
rooms

1. Such dressing rooms as an engineer may direct.
2. Suitable accommodation for clothing not worn by employees during working hours and for work clothes that must be kept separate from street clothes because of the presence of poisonous, irritating or infectious materials.
3. Where necessary, adequate facilities for drying work clothes. *New.*

210.—(1) The manager shall provide on surface, where ^{Lunch areas} more than fifteen persons congregate to eat, an area or places sufficiently large to accommodate all such persons together with equipment satisfactory to an engineer.

(2) The employer shall ensure that no person takes food ^{Idem} into or eats in a room, area or place where any poisonous substances are exposed or where deleterious vapours, mists, fumes, dust or gases are known to be present or any room, area or place designated by an engineer, and shall ensure that potable water in any such room, area or place is taken directly from a water pipe or fully enclosed container.

(3) No person shall take food into or eat in a room, area ^{Idem} or place referred to in subsection 2. *New.*

211. An engineer may, with respect to a plant in operation ^{Existing plants} before the requirements of sections 207 to 210 came into force, permit the continued use of such sanitary facilities satisfactory to him that are in use therein notwithstanding that such facilities do not comply with the requirements of the said sections. *New.*

Lighting

212. Wherever persons are required to work in a plant, suitable natural or artificial lighting without unnecessary glare or shadows, shall be provided and maintained and where necessary be sufficient to enable a person with normal vision to read dials on control panels or typewritten orders and instructions without eye strain. *New.*

VENTILATION AND DUST CONTROL — MINES

Pure air required

- 213.—(1) The ventilation in every mine shall be such that the air in all of its workings, which are in use shall be free from dangerous amounts of noxious impurities and shall contain sufficient oxygen to obviate danger to the health of anyone employed in the mine.

Mechanical ventilation systems

- (2) In mine workings where air as described in subsection 1 cannot be obtained by natural ventilation, approved means for mechanical ventilation shall be provided and kept in operation until the workings have been abandoned or until satisfactory natural ventilation has been brought about therein. 1961-62, c. 81, s. 203 (1, 2), *amended.*

Use of fans

- (3) All structures containing fans used in connection with the underground ventilation of a mine shall be constructed of fire-resistive materials. 1961-62, c. 81, s. 203 (3), *amended.*

Heating mine air

- (4) Any proposed method of heating the underground mine ventilating air shall be submitted for approval to the district electrical-mechanical engineer.

Direct-fired heaters

- (5) Any proposed method of heating air at a mine, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer. *New.*

Underground workings, examination of air

- (6) Underground workings that are not in a positive ventilation circuit shall be examined before being used in order to ascertain whether dangerous gases have accumulated there or whether an oxygen deficiency exists, and only such persons as are necessary to make the examination shall be allowed to proceed to such places until the workings are safe to work or travel in.

Idem

- (7) Such workings shall be barricaded off and posted with signs which warn persons of the hazard.

Idem

- (8) Only authorized persons shall enter such posted workings. 1961-62, c. 81, s. 204, *amended.*

- (9) No internal combustion engine shall be installed or operated in a shaft or adit or in any working in connection with a shaft or adit unless permission in writing from the chief engineer is first obtained. 1961-62, c. 81, s. 205 (1). Internal combustion engine underground
- (10) Every place in a mine, where drilling, blasting or other operations produce dust in dangerous quantities, shall be adequately supplied at all times with clean water under pressure or other approved appliance for laying, removing or controlling dust. Keeping water supply to lay dust
- (11) A development heading, such as a drift, cross-cut, raise or sub-drift, shall be furnished with an approved water blast which shall discharge within an effective distance of the face being advanced and shall be applied so as to wet the area for at least fifteen minutes after blasting, and, if such area is not thoroughly wetted prior to the entry of any person it shall be wetted down as soon as possible. 1961-62, c. 81, s. 280 (1, 2). Approved water blast
- (12) A fresh air supply independent of the air supplied to any machine or drill used therein shall be provided, Auxiliary air supply
- (a) in every raise;
 - (b) in every sub-drift over twenty-five feet in length; and
 - (c) in every stope with one entry and no through ventilation,
- and such fresh air supply shall be controlled outside or at the beginning of the heading, and the air shall be turned on by the blaster after he has detonated any blast in the heading. 1961-62, c. 81, s. 280 (3), *amended*.
- (13) Before returning to the scene of a blasting operation, every person shall assure himself that sufficient air has been introduced into the working place to drive out or dilute to a safe degree the gases produced in the blasting operation. 1961-62, c. 81, s. 249, *amended*. Ventilation of working places after blasting
- (14) The times for blasting shall be so fixed that persons shall be exposed as little as practicable to dust and smoke. 1961-62, c. 81, s. 281, *amended*. Time for blasting

VENTILATION AND DUST CONTROL — PLANTS

- | | |
|--------------------------------------|--|
| Pure air
required | 214.—(1) There shall be provided a positive supply of fresh air into, and provision for the removal of vitiated air from, a plant building that is sufficient to keep the air reasonably pure and to render harmless, so far as is reasonably practicable, all gases, vapours, dusts or other impurities that are likely to endanger the safety of any person therein. |
| Heating | (2) The temperature of all plant buildings in which persons are normally required to work shall be regulated so as to be suitable for the work to be performed therein, and so as to be not likely to endanger the safety of any person. <i>New.</i> |
| Direct-fired
heaters | (3) Any proposed method of heating air at a plant, using a direct-fired heater, shall have the design approved by the Department of Energy and Resources Management prior to final acceptance by the chief engineer. |
| Mechanical
ventilating
systems | (4) There shall be provided and used, where a process is carried on that produces a gas, vapour, dust or other impurity that is likely to be inhaled to an injurious extent by persons in the plant building, such mechanical means satisfactory to an engineer, as are capable of, <ul style="list-style-type: none"> (a) preventing, as far as is reasonably practicable, such inhalation; (b) effectively carrying off and disposing of such gases, vapours or dusts; and (c) preventing, as far as is reasonably practicable, the recirculation and re-entry of air containing such impurities. |
| Personal
protective
equipment | (5) Where required, suitable personal protective equipment shall be worn by any person exposed to any hazard mentioned in subsection 4. |
| House-
keeping | (6) Any place in a plant where dust may accumulate shall be regularly cleaned by vacuum, wet sweeping, wet shovelling or other method that reduces the dissemination of dust into the atmosphere. |
| Abrasive
blasting | (7) Abrasive blasting or other like operations inside a plant shall be conducted inside an enclosure so constructed and ventilated as to effectively prevent dust from entering the atmosphere of a plant building, <ul style="list-style-type: none"> (a) if this is impracticable; or |

- (b) where the operation is likely to produce silica or other harmful dusts in the atmosphere of the plant,

the person conducting the operation and other persons in the affected area shall wear suitable breathing apparatus.

- (8) Suitable precautions shall be taken to ensure that any tank, vat, chamber, pit, pipe, flue or confined space in a plant that may be entered by any person, ^{Confined spaces and tanks}

- (a) has a suitable man-hole or other means of easy egress from all accessible parts of the confined space; and

- (b) is safe for entry.

- (9) Any container referred to in this section shall be tested by a qualified person, who shall record the result of each test conducted by him, and these records shall be available to an engineer. ^{Containers}

- (10) Where any container referred to in this section has been tested and found, ^{Idem}

- (a) unsafe for entry; or

- (b) safe for entry, but may thereafter become unsafe to remain in or enter,

no person shall enter or be allowed to enter or remain in such container unless,

- (c) the person is using a suitable breathing apparatus and wearing a safety belt or safety harness, the free end of the rope of which is held by a person, equipped with a suitable alarm, who is keeping watch outside the container and who is capable of pulling the person from the confined space; and

- (d) the person entering the container is using such other equipment necessary to ensure his safety; and

- (e) there is conveniently available a person adequately trained in artificial respiration. *New.*

PROTECTION IN MINES AND PLANTS

- 215. Where any gas, liquid, vapour or dust is at a pressure other than atmospheric pressure, no person shall open or be allowed to open its container unless, ^{Dangerous pressures}

(a) before any fastening of the container and of any container connected therewith is loosened, any flow into or out of such container is effectively stopped; and

(b) before any fastening of the container is removed, all practicable steps are taken to adjust the pressure of gas, vapour, liquid or dust in the container so that the pressure equals atmospheric pressure,

and if any such fastening has been loosened or removed, it shall be securely replaced before any gas, vapour, liquid or dust is permitted to enter the container. *New.*

Plastic
piping

216. The installation of plastic pipe used with a pressure in excess of 50 pounds per square inch shall be approved by the district engineer. *New.*

Transfer of
liquids or
solids by
compressed
air

217. The transfer of liquids or solids, including fuels, from one location or container to another location or container by the application of air under pressure shall not be permitted, except where properly-designed and tested equipment is used for this purpose. 1961-62, c. 81, s. 431, *amended.*

PROTECTION IN PLANTS

Open tanks,
vats, etc.

218.—(1) Every tank, vat or other container for holding a liquid, the top edge of which is less than three feet six inches above the highest floor, ground or platform from which a person might fall into it, shall be securely covered or securely fenced to at least three feet six inches above such floor, ground or platform.

Silos,
hoppers,
etc.

(2) Every silo, bin, hopper or other container or structure that is constructed to discharge from the bottom dry bulk material contained or stored in it, shall have the top of the silo, bin, hopper, structure or container,

(a) provided with a solid cover; or

(b) guarded with a metal grating or bars; or

(c) traversed by a gangway; or

(d) encircled or encompassed at its perimeter by a floor or platform.

- (3) Where, in the opinion of an engineer, the provisions of subsection 1 or 2 are not practicable, other practicable means satisfactory to the engineer shall be taken to prevent any person from falling into the container. Other safety precautions
- (4) Any stair, gangway or platform above, across, inside or outside a container referred to in subsection 1 or 2 shall be, Gangways, etc.
- (a) at least twenty-two inches wide;
- (b) provided with an upper rail and either an intermediate rail and toe board or equivalent protection on both sides to a height of not less than three feet six inches; and
- (c) securely fixed.
- (5) Any covering, fencing, stair, gangway or platform mentioned in this section shall be maintained in a safe condition. Duty to maintain
- (6) No person shall enter or be allowed to enter or remain in any silo, bin, hopper, or other container or structure for containing or storing bulk material unless, Precautions on entry
- (a) all further supply of material thereto is stopped and proper precautions are taken to prevent any further supply; and
- (b) the person is wearing a safety belt or safety harness, and at least one other person, equipped with a suitable alarm, is in constant attendance, outside the container, who is capable of rendering any necessary assistance. *New.*
- 219.—(1) Before any person is allowed to work on a stock pile of ore, limestone, coke or other material, the stock pile shall be inspected by some authorized person whose duty it is to see that it is in a safe working condition. 1961-62, c. 81, s. 436, *amended*. Inspection of stock pile
- (2) No person shall work or be allowed to work on or near any bulk material that is packaged or other material that is so piled and disposed as to be likely to endanger his safety. Working near bulk materials
- (3) There shall be provided two exits from a tunnel under a stockpile. *New.* Exits from tunnels under stockpiles

Protection
from
overhead
operations

220. No person shall be employed in a location where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, *amended*.

Passage-
ways

- 221.—(1) All passageways and other walking surfaces in a plant shall be maintained in a safe condition and free from obstructions and shall be of sufficient size to ensure that crowding, that is likely to endanger the safety of persons therein, does not occur.

Floor
openings

- (2) Every opening in a floor or other surface in a plant building that may be used by a person shall be,
(a) protected by a guardrail; or
(b) covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

Safe floor
loading

- (3) The maximum safe load that a floor or roof of a plant is capable of bearing shall be conspicuously marked or posted to the satisfaction of an engineer when so directed by him.

Ladders

- (4) Except for approved access ladders to equipment, no ladder shall be installed in a plant at an inclination of more than 70 degrees to the horizontal. *New*.

Antidotes
and
washes

- 222.—(1) At every plant where poisonous or dangerous compounds, solutions or gases are used or produced, there shall be kept in a conspicuous place, as near the compounds, solutions or gases as is practicable, a sufficient supply of satisfactory antidotes and washes, and there shall be installed eye wash fountains and, where necessary, safety showers, for treating injuries received from such compounds, solutions or gases.

Idem

- (2) Such antidotes and washes shall be properly labelled and explicit directions for their use affixed to the boxes containing them. 1961-62, c. 81, s. 427. *amended*.

Storage,
production,
etc., of
acids,
poisons

- 223.—(1) Where an acid or poisonous compound or any other material that is likely to endanger the health of an employee is produced, transferred, used or stored in a plant, due provision shall be made to reduce to a minimum the hazard of handling or storing such material.

Personal
protective
equipment

- (2) Where the provisions taken under subsection 1 do not remove the hazard, personal protective equipment shall be worn by the person exposed to the hazard.

- (3) Where such material is present, there shall be posted ^{Notice} in a conspicuous place, when so required by the chief engineer, notices stating the dangers involved and the precautions to be taken.
- (4) Where required, the employer shall provide the ^{Information} chief engineer with accurate information regarding the percentage of any harmful ingredient in such material.
- (5) Any person who, for use in a plant, manufactures, ^{Labels} distributes or purchases any material that contains benzol, carbon tetrachloride, lead or other ingredient that is deemed dangerous to health by the chief engineer, shall indicate the presence of such ingredient by a label lettered in legible type, distinctly visible and affixed to each package or container thereof.
- (6) The chief engineer, on the advice of the director of ^{Medical examination} the Environmental Health Branch of the Department of Health, may require at specified intervals by qualified physicians and at the expense of the employer a physical examination of any person employed in a plant having a process that the chief engineer considers is likely to endanger such person's safety, and the physician shall forthwith send or cause to be sent to such director a report of the examination in a form suitable to the chief engineer.
- (7) The examination required under subsection 6 shall be ^{Idem} prescribed by such director and may include an x-ray examination and blood or other tests. *New.*

HANDLING MOLTEN MATERIALS

- 224.—(1) Persons employed in a plant in the handling of ^{Shields for protection against burning} molten materials shall be supplied with suitable shields and appliances to protect them as far as possible against being burned.
- (2) It is the duty of all such persons to use the shields ^{Idem} and appliances. *New.*
- 225.—(1) There shall be maintained in readily accessible ^{Rescue apparatus} places at all plants, where the atmosphere may contain dangerous concentrations of poisonous gases or vapours, detection equipment, breathing apparatus and portable resuscitating apparatus of approved type, with an adequate supply of material for the proper operation of the apparatus.

Trained
personnel

- (2) There shall also be on duty in each working shift one or more persons appointed by the manager and trained in the use of breathing and resuscitating apparatus. 1961-62, c. 81, s. 451, *amended*.

Scale cars

226. Each scale car shall be provided with an audible warning alarm that shall be sounded by the operator each time a car is started, or each car shall be equipped with an automatic mechanical warning alarm that will sound when the car is moved. 1961-62, c. 81, s. 437.

Pouring of
hot
materials

- 227.—(1) Every effort shall be made to prevent molten material from coming into accidental contact with cold, damp or rusty surfaces where such contact may cause an explosion. 1961-62, c. 81, s. 438 (2).

Examina-
tion of
moulds,
etc.

- (2) Every ladle or slag pot shall be examined before molten material is placed therein. 1961-62, c. 81, s. 438 (1).

Filling of
moulds,
etc.

- (3) When molten material is transported by mechanical means in ladles or slag pots and the safety of persons may be endangered from splashing, every effort shall be made to ensure that the ladles or slag pots are not filled above a point four inches below the top of the ladle or slag pot.

Idem

- (4) If such limit is exceeded, the ladle or slag pot shall not be moved until the supervisor or other responsible person has warned the persons required to handle the ladle or slag pot of this condition and has warned all other persons in the vicinity. 1961-62, c. 81, s. 439, *amended*.

Slag pit

- (5) The shovel operator shall obtain authorization from the supervisor or other person in charge of a blast furnace before commencing to dig the slag pit. *New*.

Blast
furnaces

- 228.—(1) Whenever it becomes necessary for a person to go above the casting floor of an operating furnace, excepting the access to the crane cab or runway and not adjacent to the furnace and having direct egress to the outside, such person shall notify the foreman, or other responsible person, who shall see that there is always a second person in attendance whose duty it is to remain outside the gaseous area and act as a watcher and give the alarm to the casthouse or stockhouse and render every possible assistance in case of gassing or other danger. 1961-62, c. 81, s. 444, *amended*.

- (2) Safety belts shall be provided and maintained in a readily accessible place for immediate use in case it becomes necessary to rescue a person from the top structure of a furnace or the ancillary equipment in a plant. *New.* ^{Safety belts}
- (3) All bustle pipes shall be provided with safe working platforms equipped with hand-rails at least three feet six inches in height and, wherever practicable, the platform shall not rest directly on the bustle pipe, but shall be supported on angle bars, so that the floor plate will not become sufficiently hot to cause burns to a person falling on it. 1961-62, c. 81, s. 445 (1), *amended.* ^{Protection from bustle pipes}
- (4) Access to the platform shall be by a stairway provided with hand-rails. 1961-62, c. 81, s. 445 (2). ^{Idem}
- (5) A suitable line of communication by telephone, gong, or other mechanical means, shall be maintained between the furnace top, and all other dangerous places, to the cast-house, skip operator's room or other place where persons are continuously on duty. 1961-62, c. 81, s. 446, *amended.* ^{Line of communication}
- (6) A suitable ladderway or stairway shall be provided from the foundation to the top of the furnace. 1961-62, c. 81, s. 447. ^{Stairways and ladderways}
- (7) Unless an approved type of elevator is provided as a means of travel to the furnace top, stairways shall be installed at an angle not greater than 50 degrees from the horizontal and shall be provided with landings or turnouts at intervals of not more than twenty-five feet, measured on the slope, so that it will not be possible for a person to fall from the top to the foundation below. 1961-62, c. 81, s. 448, *amended.* ^{Stairways protected}
- (8) When ore becomes frozen or jammed in the furnace hopper or bell and a person is required to bar the ore into the furnace, a suitable guard-rail shall be provided to prevent the person from slipping on to the bell. 1961-62, c. 81, s. 450, *amended.* ^{Protection around bell}
229. Every supervisor shall personally attend, or appoint a competent person to supervise, any work around a blast furnace in a plant that involves unusual accident hazard, such as, ^{Supervision of hazardous work around furnaces}
- (a) work in gas mains or cleaners, tearing out linings, relining, work in the casthouse, work about the stoves, when blowing in or blowing out, and any work about the bells or stock line;

- (b) when the furnace is known to be hanging and liable to slip, he shall see that no person is allowed on top for any purpose; or
- (c) when work beyond that of normal inspection and minor maintenance is to be conducted at the furnace top structure,
 - (i) the blast furnace shall be shut down and the area cleared of operating personnel,
 - (ii) the proper work order shall be obtained from the supervisor,
 - (iii) before the repair work is begun, the area shall be tested for toxic gas and such tests shall be continued as necessary for the protection of the personnel,
 - (iv) breathing apparatus, safety ropes and any additional rescue equipment as necessary shall be available. 1961-62, c. 81, s. 449, *amended*.

HAULAGE — ON SURFACE AND UNDERGROUND

Interpre-
tation

230.—(1) In this Part,

- (a) “locomotive” means a motor vehicle which only operates on rails;
- (b) “motor vehicle” means a truck, automobile or any other vehicle propelled or driven otherwise than by muscular power, and includes trackless haulage equipment;
- (c) “vehicle” includes a motor vehicle and every vehicle drawn or propelled by muscular power. *New*.

Warning
equipment

- (2) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a suitable audible signal that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (1), *amended*.

Warning
equipment
to be used

- (3) The audible signal on a locomotive or motor vehicle shall be sounded were practicable when the vehicle starts to move in an enclosed building at a mine or plant or underground at a mine and at such other times as a warning of danger is required. 1961-62, c. 81, s. 299 (1), *amended*.

Warning
device for
backing up

- (4) Every motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped,

where practicable, with a suitable warning device which will operate automatically when the motor vehicle starts to move in reverse. *New.*

- (5) (a) Except when used in adequately lighted buildings or areas, every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with a headlight or headlights that shall be maintained in proper working condition, and motor vehicles used for trackless haulage shall be equipped with a suitable tail-light or tail-lights that shall be maintained in proper working condition. 1961-62, c. 81, s. 297 (2). ^{Headlight and tail-light}
- (b) When a motor vehicle is disabled, when lighted lamps are required, and is located on the travel portion of the roadway, suitable flares, reflectors or lamps shall be placed to give adequate warning. *New.* ^{Disabled vehicle}
- (6) Every locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be equipped with suitable brakes. ^{Brakes}
- (7) No locomotive or motor vehicle used on surface at a mine or plant or underground at a mine shall be operated unless the brakes, steering, audible signals, lights and rear-vision mirrors, where applicable, are in satisfactory condition. ^{Operating equipment to be in satisfactory condition}
- (8) Whenever the face of a main ramp or inclined tunnel in a mine exceeds a vertical depth of 300 feet without intermediate access to the ramp or tunnel from an operating shaft or winze a suitable approved vehicle shall be provided to transport persons down and up the ramp or tunnel. *New.*
- 231.—(1) The control levers of storage battery and trolley locomotives used on surface at a mine or plant or underground in a mine shall be so arranged that the lever cannot accidentally be removed when the power is on. 1961-62, c. 81, s. 298. ^{Control levers}
- (2) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be moved under its own power unless, where it is manually operated, the operator is in proper position at the controls or, where it is operated by a remote control or automated system, the system is approved by the chief engineer. *New.* ^{Control systems}
- (3) No locomotive or motor vehicle used on surface at a mine or plant or underground in a mine shall be left ^{Unattended locomotives}

unattended unless the controls have been placed in the safe position for parking and the brakes have been set. 1961-62, c. 81, s. 302.

Guard to
protect
motorman

- (4) The operating platform of a locomotive used on surface at a mine or plant or underground in a mine shall be provided with a suitable seat and an adequate guard for the protection of the motorman. 1961-62, c. 81, s. 299 (3), *amended*.

Wheel
chocks

- 232.—(1) Motor vehicle haulage equipment used on surface at a mine or plant or underground in a mine shall carry, where practicable, wheel chocks to be used to block movement on slopes when the equipment is left unattended or is undergoing maintenance.

Safety
support for
truck boxes

- (2) Every motor driven dump truck used on surface at a mine or plant or underground in a mine shall be equipped with a suitable safety support device, which shall be used when repairs or maintenance are conducted under a raised box. *New*.

Prohibitions
around
moving
machines

- 233.—(1) No operator shall leave the controls of his vehicle or machine unattended on surface at a mine or plant or underground in a mine while,

- (a) the bucket of a front end loader, backhoe or other excavating machine;
- (b) the blade of a bulldozer; or
- (c) the load of a fork-lift truck, crane or other hoisting machine,

is in a raised position, except when it is suitably and safely supported.

Idem

- (2) No person on surface at a mine or plant or underground in a mine shall be under any part of a motor vehicle or other equipment in which the lowering of that part may endanger the person unless that part is safely blocked in such a way as to prevent its lowering.

Idem

- (3) No person on surface at a mine or plant or underground in a mine shall operate a crane or other hoisting machine in such a way that any part of its load may pass over a person other than the person receiving the load.

Idem

- (4) A person on surface at a mine or plant or underground in a mine receiving a load shall so far as is practicable position himself so that the load does not pass over him.

(5) No person on surface at a mine or plant or under-^{Idem} ground in a mine shall operate a shovel, backhoe or similar excavating machine in such a way that it or any part of its load may pass over a person.

(6) No person on surface at a mine or plant or under-^{Idem} ground in a mine shall remain on or in a motor vehicle where he might be endangered during the loading or unloading of the vehicle.

(7) Where a motor vehicle on surface at a mine or plant or underground in a mine is being backed up in a location where a person may be endangered by the vehicle backing up or where the driver may be endangered, another person shall be stationed to direct the driver in backing up the vehicle. ^{Idem} *New.*

234.—(1) (a) Except for standard gauge track on surface, ^{Track condition} every switch in a track on surface at a mine or plant or underground in a mine shall have the frog and guard rail entrances provided with a guard block if its construction is not such that the hazard of a person's foot being caught in it is reduced to a minimum.

(b) Standard gauge track on surface at a mine or plant shall be installed and maintained as called for in the Uniform Code of Operating Rules prescribed by the Transport Commissioners for Canada. ^{Standard gauge track} *New.*

(2) All tracks in use on surface at a mine or plant or underground in a mine shall be maintained in good working condition. 1961-62, c. 81, s. 409, ^{Maintenance of tracks} *amended.*

HAULAGE — UNDERGROUND

235.—(1) In motorized haulage underground in a mine, ^{Tail-light on trains} a suitable tail-light shall be used in conjunction with made-up trains. 1961-62, c. 81, s. 299 (2), *amended.*

(2) Every self-propelled unit of trackless haulage equipment used underground in a mine shall be equipped with suitable lights or reflectors that show in the direction of travel the width of the vehicle. ^{Lights to show width of vehicle} 1961-62, c. 81, s. 297 (3).

236.—(1) In motorized haulage in any level, drift or tunnel in or about a mine, no unauthorized person ^{Riding on vehicles prohibited} shall ride on any vehicle. 1961-62, c. 81, s. 300 (1), *amended.*

(2) Special trips for persons only shall be made on ^{Idem} approved vehicles. 1961-62, c. 81, s. 300 (2).

Emergency
exit

- (3) Every vehicle in which any person may ride shall be equipped with an emergency exit. *New.*

Clearance
and safety
stations

- 237.—(1) On every level of a mine on which motorized track haulage is employed, a clearance of at least eighteen inches shall be maintained between the sides of the haulageway and the cars or locomotive, or there shall be a clearance of twenty-four inches on one side, or safety stations shall be cut every 100 feet. 1961-62, c. 81, s. 301 (1), *amended.*

Idem,
marking

- (2) Such safety stations shall be plainly marked. 1961-62, c. 87, s. 301 (2).

Clearance
for trackless
haulage

- (3) On every level of a mine on which motorized trackless haulage equipment is employed, a minimum total clearance of five feet shall be maintained between the sides of the haulageway or workings and the motorized equipment.

Idem, plus
pedestrian
travel

- (4) On every level of a mine regularly used both for pedestrian traffic and motorized trackless haulage where there is a total minimum clearance of less than seven feet between the sides of the haulageway and the vehicle, safety stations shall be cut at intervals not exceeding 100 feet and they shall be plainly marked. 1961-62, c. 81, s. 301 (3, 4), *amended.*

Travelways
clear of
obstructions

- (5) All regular travelways in or about a mine shall be maintained clear of debris or obstructions that are likely to interfere with safe travel. 1961-62, c. 87, s. 301 (5).

HAULAGE — ON SURFACE

Guard-rails
at track
approaches

- 238.—(1) Guard-rails shall be placed at the approach to tracks on surface at a mine or plant where motorized haulage is used and where the view of the tracks is obstructed in one or both directions.

When im-
practical

- (2) Where restricted clearances make the use of guard-rails impractical in the opinion of the district mining engineer, he may permit such guard-rails to be omitted but shall require that there be installed at the track approaches a suitable type of warning signal that will automatically give adequate, audible and visible warning at all times of the approach of the conveyance, or that a switchman shall walk ahead of the leading conveyance on the track when the conveyance is in dangerous proximity to the area requiring guarding and stand guard at such approaches. 1961-62, c. 81, s. 434, *amended.*

- 239.—(1) Where motorized haulage is used on surface at a mine or plant and the clearance between the sides of conveyances on parallel tracks or between the sides of conveyances and the side of a building or other structure is less than eighteen inches, the location shall be plainly marked showing the danger. 1961-62, c. 81, s. 440, *amended*. Side clearance,
haulage
- (2) At the approach to an overhead bridge, pipe line or a similar structure on a standard-gauge railway track at a mine or plant where the clearance is less than six feet between the top of a railway car and the underside of the structure, a "low bridge" warning device shall be installed. 1961-62, c. 81, s. 441, *amended*. Overhead hazards
- (3) Where the operator may be exposed to overhead hazards at a mine or plant, a cab, screen or other adequate overhead protection shall be provided on, Overhead hazards
- (a) a power-driven crane, shovel or similar machine;
 - (b) a fork-lift truck; and
 - (c) a front-end loader or other excavating machine. *New*.
240. Motor vehicles operating on surface at a mine shall be equipped, where practicable, with rear-vision mirrors. *New*. Rear-vision mirrors

PROTECTION FROM MACHINERY — MINES AND PLANTS

241. In this Part,

Interpre-
tation

- (a) "lifting device" means a device that is used to raise or lower any material or object and includes its rails and other supports but does not include a device to which the provisions of this Part governing elevators or construction hoists apply;
- (b) "prime mover" means an initial source of motive power;
- (c) "transmission machinery" means any object by which the motion of a prime mover is transmitted to a machine that is capable of utilizing such motion, and includes a shaft, pulley, belt, chain, gear, clutch or other device. *New*.

- Clearances 242.—(1) Clearances adequate for the safety of persons shall be maintained in a mine or plant between the moving part of any machine or any material carried by the moving part and any other machine or structure.
- Lighting (2) Adequate lighting shall be provided for all persons who are required to work near or about machinery in a mine or plant.
- Fences, guards (3) Every prime mover, machine, transmission machinery or device that is dangerous to the safety of any person in a mine or plant shall be safely fenced or guarded,
- (a) unless its position, construction or attachment assures the same protection as if it were safely fenced or guarded; or
- (b) unless it is provided with a safety device that automatically prevents a person operating it from coming into contact with any dangerous part.
- Idem (4) Every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion connected to or forming part of or appurtenant to any machine, transmission machinery or device in a mine or plant shall be so recessed, encased, located or otherwise effectively guarded as to prevent injury to any person.
- Repairs (5) No person shall, or shall be permitted to clean, oil, adjust, repair or perform maintenance work on any machine, transmission machinery or device in a mine or plant while it or any part of it that is likely to endanger the safety of any person is in motion, except when such work is not practicable while the machine, transmission machinery or device is stopped.
- Starting (6) No person shall work or be allowed to work where the starting of a machine, transmission machinery or device in a mine or plant is likely to endanger the safety of any person, due to electrical hazard or exposure to moving parts,
- (a) unless prior to doing repair or maintenance on electrically driven machinery, the person has made arrangements to ensure that the disconnect switch or switches supplying power to the machinery are opened and tagged or locked in accordance with section 435; or

- (b) unless, for other than electrically driven machinery, precautions have been taken to prevent such starting. *New.*
- 243.—(1) Every stationary power-driven grinding wheel in a mine or plant shall be provided with a suitable hooded guard. 1961-62, c. 81, s. 404 (1), *amended.* Grinding wheels to be guarded
- (2) Such guard shall be adjusted close to the wheel and extended forward, over the top of the wheel, to a point at least 30 degrees beyond a vertical line drawn through the centre of the wheel. 1961-62, c. 81, s. 404 (2). Idem
244. Every runway or staging in a mine or plant that is more than five feet from the floor and used for oiling or any similar purpose shall be provided with a hand-railing. 1961-62, c. 81, s. 406, *amended.* Runways to have hand-railing
245. Every counterweight in a mine or plant shall be situated or guarded so as to reduce to a minimum the hazard of injury to a person along its travel or should it become detached from its fastenings. Counter-weights
246. Persons engaged in dangerous proximity to moving machinery in a mine or plant shall not wear or be allowed to wear loose outer clothing. 1961-62, c. 81, s. 405, *amended.* Wearing loose clothing
- 247.—(1) The rated working load of every lifting device in a mine or plant shall be plainly marked on the device. Lifting devices
- (2) No lifting device in a mine or plant shall be loaded beyond its rated working load, except for the purpose of a test. Idem
- (3) No cable, chain, rope, sling, ring, hook, shackle, swivel or other part of a lifting device in a mine or plant shall be used unless it is of good construction, sound material and adequate strength to safely support the maximum load to which it is likely to be subjected, and is properly maintained. Idem
- (4) Every lifting device in a mine or plant shall be thoroughly examined at least annually by an authorized person. Idem
- (5) All rails in a mine or plant on which a lifting device moves shall be of proper size and properly laid and maintained and have an even running surface. Idem
- (6) No newly-installed lifting device in a mine or plant shall be used until it has been thoroughly tested and examined by an authorized person. *New.* Idem

WELDING AND BURNING — MINES AND PLANTS

- | | |
|--|--|
| Radiation protection | 248.—(1) All persons exposed to the hazard of radiation from welding or burning operations in a mine or plant shall use protective helmets, goggles, or other devices. |
| Ventilation or respiratory protection requirements | (2) When welding or burning operations in a mine or plant emit harmful fumes, adequate ventilation shall be provided, or respirators shall be worn by persons exposed to the fumes. |
| Protection against electric welding arc | (3) Persons shall do no welding or burning in a mine or plant where other persons may be exposed to radiation from the operation, unless such other persons wear suitable eye protection or are protected by screens. |
| Hand and arm protection | (4) Gauntlet gloves and arm protection shall be worn by persons when electric welding in a mine or plant. |
| Fire fighting equipment | (5) Suitable fire extinguishers shall be kept at hand during welding or burning operations in a mine or plant, or other fire fighting equipment shall be readily available. |
| Location of welding equipment | (6) Cylinders, piping and fittings of compressed and liquefied gas systems pertaining to welding and burning in a mine or plant shall be so located as to avoid physical damage to the cylinders, piping and fittings. |
| Flames | (7) Persons shall guard against sparks or flames from coming in contact with cylinders, regulators or hoses of compressed-gas systems pertaining to welding and burning in a mine or plant and all charged cylinders shall be protected from excessive heat. |
| Leaks | (8) Before using any gas-welding or burning equipment, persons shall ensure that all parts of the equipment are free from defects, leaks, oil or grease. |
| Cylinder valves | (9) Cylinder valves shall be closed when work is finished or cylinders are empty, and valve-protection covers shall be kept in position when the cylinder is not connected for use. |
| Containers | (10) No welding, brazing, soldering or burning operation shall be conducted on any container that has been used to contain any explosive or flammable substance, unless all practicable steps have been taken to, <div style="margin-left: 40px;"> (a) remove the substance and any fume, gas, vapour or dust arising from it; or </div> |

- (b) render the substance and any fume, gas, vapour or dust arising from it non-explosive or non-flammable,

and if such container has been subjected to any such alteration or repair, it shall be ensured that no explosive or flammable substance enters the container until the container has cooled sufficiently to prevent any risk of igniting the substance. *New.*

TRAVELLING CRANES — MINES AND PLANTS

- 249.—(1) In this section and in section 499, “crane” ^{Interpre-}
means a crane that travels on fixed tracks and is
operated from a cab mounted on the crane and which
may be radio controlled. 1961-62, c. 81, s. 401 (1),
amended.
- (2) No person under the age of eighteen years and no ^{Qualifica-}
person who has not had adequate experience on a ^{tions of}
crane shall be authorized to operate a crane in a ^{crane}
mine or plant. 1961-62, c. 81, s. 401 (7), *amended.* ^{operators}
- (3) (a) No person shall operate or be permitted to ^{Idem}
operate a crane at a mine or plant unless he
has been examined by a legally qualified
medical practitioner acceptable to the employ-
er and the medical practitioner has issued to
him, on the form prescribed, a crane operator’s
medical certificate to the effect that to the
best of the practitioner’s knowledge the person
is not subject to any infirmity, mental or
physical (particularly with regard to sight,
hearing and heart) to such a degree as to
interfere with the efficient discharge of his
duties.
- (b) Every crane operator’s medical certificate ^{Expiry of}
lapses and shall be deemed to have expired ^{certificate}
at the end of one year from its date.
- (c) Every crane operator’s medical certificate ^{Filing of}
shall be kept on file by the employer and made ^{certificate}
available to an engineer at his request.
- (4) No person, other than the operator, shall be per- ^{Riding}
mitted to ride on a crane or any part thereof in a ^{prohibited}
mine or plant or on any material carried by the
crane, except for inspection, supervision, mainten-
ance or repair, or the instruction of a new operator.
1961-62, c. 81, s. 401 (3-6), *amended.*

Warning
devices

- (5) Every crane in a mine or plant shall be equipped with a whistle, bell, gong or horn that shall be sounded at such times as are necessary to give warning of the approach of the crane to places where persons are working or are liable to pass. 1961-62, c. 81, s. 401 (2), *amended*.

Idem

- (6) Every crane in a mine or plant shall be equipped with an emergency exit.

Where
crane
endangers
person

- (7) Where any person is on or near the wheel track of a crane in any place in a mine or plant where the safety of such person is likely to be endangered by the crane, the operator of the crane shall be warned of the presence of such person and the crane or any part thereof shall not be allowed to approach within ten feet of the place.

Devices to
prevent
overwind

- (8) Every crane in a mine or plant shall be equipped with suitable devices to prevent overwinding.

Daily
examination
of cranes

- (9) The manager of a mine or plant shall depute one or more qualified persons to examine daily such parts of any crane or apparatus pertaining thereto upon the proper working of which the safety of persons depends.

Testing
before use

- (10) All shafts, hooks and other structural parts affecting the safe operation of every crane shall be non-destructively tested before being put into service, and thereafter at such intervals as to ensure that they are in safe condition.

Idem

- (11) (a) Crane ropes shall be examined visually at least once in each day to detect the presence of kinks, broken wires or other visible damage.
- (b) Crane ropes shall be thoroughly examined at least once in each week to ensure that they are in safe operating condition.
- (c) If during such examinations there is discovered any weakness or defect whereby the safety of persons may be endangered, the crane shall not be used until the defect has been remedied or the rope removed from service.
- (d) Every crane rope, when newly installed, shall have a factor of safety of not less than 10 when

carrying its maximum load and using the breaking strength of the rope as certified by the rope manufacturer.

- (e) No crane rope shall be used when the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds four.
- (12) A record of all the examinations and tests and of other regular maintenance examinations and of all structural modifications of any crane in a mine or plant shall be kept signed by the person making the examinations, tests and modifications and such record shall be available to the district electrical-mechanical engineer at all times. *New.* Record

CONVEYOR BELTS—MINES AND PLANTS

- 250.—(1) No person shall ride on a conveyance or belt in a mine or plant unless approved by the chief engineer. Conveyors,
belts
- (2) The following apply to installations of conveyor belts in mines and plants: Idem
- (a) Where conveyerways are used as regular travelways, such travelways shall be adequately illuminated and suitable means shall be provided to protect persons from material that may fall from the belt.
 - (b) All conveyerways shall be provided with a walkway, crossover or some approved method of access for maintenance purposes.
 - (c) Walkways shall not be less than 20 inches in width and shall be equipped with guardrails on the open sides where necessary.
 - (d) Any accessible section of an electrically driven belt conveyor shall be provided with pull-cords to stop the conveyor in an emergency and such pull-cords shall reach from the head pulley to the tail pulley and all controls operated by these cords shall be of the manual-reset type.
 - (e) Where required, an approved warning device shall be provided which will warn persons that the belt is about to start.

- (f) All head, tail, drive and tension pulleys shall be guarded at the pinch points and the length of such guards shall be extended to at least three feet from the pinch point. 1961-62, c. 81, s. 410, *amended*.

PROTECTION IN WORKING PLACES OF MINES

Overhead
operations

251. No person shall work in a location in a mine where another person is working overhead unless such measures for protection are taken as the nature of the work requires. 1961-62, c. 81, s. 258, *amended*.

Fencing
of shafts
and other
openings

252. The top of every working shaft in a mine shall be securely fenced or protected by a gate or guard-rail, and every pit or opening in a mine dangerous by reason of its depth shall be securely fenced or otherwise protected. 1961-62, c. 81, s. 260, *amended*.

Gate at
shaft
entrances

- 253.—(1) At all shaft and winze openings on the surface and on every level in a mine, unless securely closed off, the hoisting compartments shall be protected by a substantial gate, which shall be kept closed except when the hoisting conveyance is being loaded or unloaded at such level.

Idem

- (2) The clearance beneath any such gate shall be kept to a minimum.

Hoisting
compartment
gates

- (3) Where haulage tracks lead up to a hoisting compartment on surface or underground, the gate on such compartment shall be reinforced in such a manner that it is sufficiently strong to withstand any impact imparted thereto by collision therewith of any locomotive, train or car operated on such tracks.

Idem

- (4) Hoisting compartment gates shall be sufficiently reinforced where there is a hazard of impact due to the approach of a motor vehicle. 1961-62, c. 81, s. 261, *amended*.

Shaft and
winze
timbering

- 254.—(1) Every shaft and winze in a mine shall be securely cased, lined or timbered, and during sinking operations the casing, lining or timbering shall be maintained within a safe distance of the bottom. 1961-62, c. 81, s. 262 (1), *amended*.

Idem

- (2) In no instance shall such distance exceed fifty feet. 1961-62, c. 81, s. 262 (2).

- (3) The guides, guide attachments and shaft casing, ^{Strength of guides, etc.} lining or timbering shall be of sufficient strength and shall be suitably designed, installed and maintained so that the safety catches referred to in section 324 may grip the guides properly at any point in the shaft. 1961-62, c. 81, s. 262 (3), *amended*.
255. There shall be provided a safe passageway and ^{Protection at shaft stations} standing room for a person outside the shaft at all workings opening into a shaft of a mine, and the manway shall in all cases be directly connected with such openings. 1961-62, c. 81, s. 263, *amended*.
- 256.—(1) Except during sinking operations, if material ^{Lining compartments at levels} is handled in a shaft or winze compartment of a mine, there shall be maintained around that compartment, except on the side on which material is to be loaded or unloaded, a substantial partition at the collar and at all levels. 1961-62, c. 81, s. 266 (1), *amended*.
- (2) Such partition shall extend above the collar and all ^{Idem} levels a distance not less than the height of the hoisting conveyance plus six feet and it shall extend below the collar and all levels at least six feet and it shall conform to the size of the conveyance allowing for necessary clearances. 1961-62, c. 81, s. 266 (2).
257. The footway or ladderway in a shaft or winze of a mine shall be separated from the compartment or ^{Partition between manway and hoisting compartments} division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290, *amended*.
258. Wherever a counterweight is used in a shaft or ^{Counter-weight compartment} winze of a mine, it shall be safely enclosed, unless it travels on guides. 1961-62, c. 81, s. 267, *amended*.
259. During shaft-sinking operations in a mine, no work ^{Protection in sinking operations} shall be done in any place in a shaft or winze while persons are working in another part of the shaft or winze below such place, unless the persons working in the lower position are protected from the danger of falling material by a securely-constructed covering extending over a sufficient portion of the shaft to afford complete protection. 1961-62, c. 81, s. 264, *amended*.
- 260.—(1) Open hooks shall not be used in conjunction ^{Open hooks not to be used} with the suspension of any shaft staging of a mine. 1961-62, c. 81, s. 264, *amended*.

- Idem (2) Open hooks shall not be used in connection with the suspension of any equipment or material in a shaft, winze, raise, or over a person in any location underground in a mine. *New.*
- Protection on shaft inspection 261.—(1) No person shall do or be permitted to do any work or conduct any examination in a compartment of a shaft or winze of a mine or in that part of the headframe used in conjunction therewith while hoisting operations, other than those necessary for doing such work or conducting such examination, are in progress in such compartment.
- Idem (2) No person shall do or be permitted to do any work or conduct any examination in a shaft or winze of a mine or in that part of a headframe used in conjunction therewith unless he is adequately protected from accidental contact with any moving hoisting conveyance or counterweight or the danger of falling objects accidentally dislodged. 1961-62, c. 81, s. 268, *amended.*
- Timbering mine workings 262. Where in a mine the enclosing rocks are not safe, every adit, tunnel, stope or other working in which work is being carried on or through which persons pass shall be securely cased, lined or timbered, or otherwise made secure. 1961-62, c. 81, s. 269, *amended.*
- Steeply-inclined raises 263.—(1) Except where approved raising equipment is used, all raises in a mine that are to be inclined at over 50 degrees and that are to be driven more than sixty feet slope distance shall be divided into at least two compartments, one of which shall be maintained as a ladderway and shall be equipped with suitable ladders. 1961-62, c. 81, s. 271 (1), *amended.*
- Idem (2) The timbering shall be maintained within a safe distance of the face and in no event shall the distance between the face and the top of the timbering exceed twenty-five feet. 1961-62, c. 81, s. 271 (2).
- Precautions as to broken material 264.—(1) Whenever a chute in a mine is to be pulled and the safety of a person may be endangered by the settling of the broken material,
- (a) the area affected by the pulling shall be guard-railed or marked by a sign or signs so that no person can inadvertently enter the area; or

- (b) any person who is working in the affected area shall be notified.
- (2) (a) Proper precautions shall be taken during the pulling operation to ascertain whether or not the broken material is settling freely from the top. ^{Idem}
- (b) When there is any indication of a hang-up, the location shall be adequately protected by suitable signs or barricades.
- (3) There shall be provided two exits from each raised platform from which broken material is pulled. ^{Exits from platform}
265. Unless the entrance to a stope in a mine is capable of being used as such at all times, a second means of entrance shall be provided and maintained. 1961-62, c. 81, s. 273, *amended*. ^{Access to stopes}
266. The top of every mill hole, manway or other opening in a mine shall be kept covered or otherwise adequately protected. 1961-62, c. 81, s. 274, *amended*. ^{Guarding mill holes, manways, etc.}
267. Wherever persons are working in a mine below a level in a place whose top is open to the level in close proximity to a haulageway or travelway, some person shall be posted to effectively guard the opening unless it is securely covered over or otherwise closed off from the haulageway or travelway. 1961-62, c. 81, s. 275, *amended*. ^{Guarding open workings}
268. The tops of all raises or other openings to a level in a mine shall be kept securely covered, fenced off or protected by suitable barricades to prevent inadvertent access thereto. 1961-62, c. 81, s. 276, *amended*. ^{Guarding tops of raises}
269. There shall be provided and maintained in every mine an adequate supply of properly-dressed scaling bars and gads and other equipment necessary for scaling. 1961-62, c. 81, s. 278, *amended*. ^{Scaling bars and gads}
- 270.—(1) Where there is non-continuous shift operation in areas of a mine, the on-coming shift shall be warned of any abnormal condition affecting the safety of operations. ^{Warning of abnormal conditions}
- (2) Such warning shall consist of a written record over the signature of a responsible person on the off-going ^{Idem}

shift and shall be read and countersigned by the corresponding responsible person on the on-coming shift before persons are permitted to resume operations in the areas indicated in such record. 1961-62, c. 81, s. 282, *amended*.

Check-in,
check-out
systems

271. At every mine where persons are employed underground, a suitable system shall be established and maintained to check in all persons who have gone underground and to check out all persons who have returned to surface, and it is the duty of such persons to check in and to check out in accordance with such system. 1961-62, c. 81, s. 283, *amended*.

Signs designating
repair work

272. Where repair work is in progress in a manway in a mine or conditions arise that may endanger travel through the manway, it shall be closed as a travelway and adequate signs designating its unfitness for travel purposes shall be posted at all entrances to it. 1961-62, c. 81, s. 284, *amended*.

Diamond-drill holes

- 273.—(1) Diamond-drill holes shall be plotted on all working plans of levels of a mine.

Guarded
while
blasting
near

- (2) When an active mine heading is advancing toward a diamond-drill hole in a mine, the collar or the nearest points of intersection of the hole or both shall be securely closed off or guarded at all times that blasting is being done within fifteen feet of any possible intersection of the hole.

Marked

- (3) The collar and any points of intersection of every diamond-drill hole in a mine shall be plainly marked at the time that drilling is discontinued or an intersection made.

Idem, with
letter "H"

- (4) Such markings shall consist of a single capital letter "H" in yellow paint measuring twelve inches by twelve inches, which shall be placed within four feet of the collar or intersection. 1961-62, c. 81, s. 285, *amended*.

Tailing
used for fill

274. Where tailings are used for filling worked-out areas underground in a mine, the moisture contained in the tailings and the liquid draining off therefrom shall not have a higher cyanide content than .005 per cent expressed as cyanide of potassium. 1961-62, c. 81, s. 286, *amended*.

HANDLING WATER — MINES

275. Every working mine shall be provided with suitable and efficient machinery and appliances for keeping the mine free from water, the accumulation or flowing of which might endanger the lives of persons in the mine or in any adjoining mine. 1961-62, c. 81, s. 199, *amended*. Removal of water from mine workings
276. Where there is or may be an accumulation of water on surface or in a mine, any working approaching the same shall have bore holes kept in advance and such additional precautionary measures shall be taken as are deemed necessary to obviate the danger of a sudden breaking-through of the water. 1961-62, c. 81, s. 200, *amended*. Precautions against flow of water
277. A suitable stopping shall be placed in every working shaft in a mine to prevent that part of the hoisting conveyance carrying persons from being inadvertently lowered into water in the sump of the shaft. 1961-62, c. 81, s. 201, *amended*. Protection at sump
- 278.—(1) In this section, Interpretation
- (a) “bulkhead” means any structure built for the purpose of impounding water or confining air under pressure in a drift, crosscut or any other mine opening and constructed in such a manner as to completely close off such drift, crosscut or other mine opening;
- (b) “dam” means a structure built for the purpose of impounding water in a drift, crosscut or other mine opening and built in such a manner as to permit an unobstructed overflow of the water.
- (2) The location of every underground bulkhead and dam within the meaning of this section shall be clearly shown on the mine plans. 1961-62, c. 81, s. 202 (1, 2). Location of bulkheads and dams
- (3) No dam behind which more than twenty-five tons of water may be impounded shall be constructed underground in a mine until application in writing is made to the district mining engineer and written permission is granted by the chief engineer and then only when constructed in accordance with plans and specifications that have been approved by the chief engineer. Permission for dams
- (4) No bulkhead shall be constructed underground in a mine without the written permission of the chief Permission necessary for bulkhead

engineer and then only when constructed in accordance with plans and specifications that have been approved by him.

Completion
of bulkhead

- (5) On the completion of the installation of a bulkhead in a mine, the manager shall immediately notify the chief engineer that it has been completed. 1961-62, c. 81, s. 202 (3-5), *amended*.

CARE AND USE OF EXPLOSIVES AND BLASTING AGENTS

Precautions
to be taken

279. Every possible precaution shall be taken in the handling and transportation of explosives and blasting agents at a mine or plant. 1961-62, c. 81, s. 211, *amended*.

Marking of
explosives

- 280.—(1) No explosive shall be used at a mine or plant unless there is plainly printed or marked on every original package containing the explosive, the name and place of business of the manufacturer, the strength of the explosive and the date of its manufacture. 1961-62, c. 81, s. 212.

Fume clas-
sification of
explosives

- (2) Only explosives in Fume Class I as established by the Explosives Division of the Department of Energy, Mines and Resources of Canada or explosives and blasting agents as permitted by the chief engineer shall be used underground in a mine.

Preparation
of blasting
agents

- (3) The preparation of a blasting agent at a mine or plant, except when prepared by a properly-authorized manufacturer of explosives or blasting agents, shall be done only with the permission in writing of the chief engineer. 1961-62, c. 81, s. 213, *amended*.

Defective
explosives,
etc., to be
reported

- (4) Every case of supposedly defective fuse, detonator or blasting cap or explosive shall be reported to the district mining engineer with the name and address of the manufacturer and accompanied, if available, by the packing slip from the original container of the fuses, detonators or blasting caps, or explosives, along with all other pertinent information available. 1961-62, c. 81, s. 214, *amended*.

Storage of
explosives
and blasting
agents

- 281.—(1) Except as otherwise provided, all explosives, blasting agents, detonators and blasting caps shall be stored on surface at a mine or plant in special suitable buildings, such as magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses.

Storage of
detonators,
etc.

- (2) Detonators, blasting caps or igniter cord shall not be stored in the same receptacle or storage building as other explosives or blasting agents.

- (3) No such storage building shall be erected or maintained at a mine or plant without the written permission of the district mining engineer, nor until the site of the building and the style of structure have been approved by him. Permission necessary before construction
- (4) Such written permission shall state the maximum quantity and kind of detonators, explosives or blasting agents that may be stored in the building. Permission to state quantity
- (5) The permission shall be posted up in the building. Permission to be posted
- (6) Every such storage building shall be under the direction of the manager or a person authorized by him. 1961-62, c. 81, s. 215 (1-6), *amended*. Storage under authorized person
- (7) Explosives or blasting agents shall not be stored within 300 feet of a mine or plant main substation. 1961-62, c. 81, s. 221, *amended*. Storage near power prohibited
- (8) The minimum distance measured at ground level between an overhead supply line and explosives or blasting agents storages shall not be less than $1\frac{1}{2}$ times the length of one span between the supports of such line. *New*. Storage near overhead supply lines
- (9) Where possible, every such storage building shall be located in accordance with the British Table of Distances in respect of its distance from the mine or plant or any other building or any public road or railway. Location of storage buildings
- (10) Where conditions are such that it is impossible to locate any storage building in accordance with the British Table of Distances, the mine or plant manager and the district mining engineer shall jointly choose the most suitable location. Idem
- (11) Storages for blasting agents may contain three times the quantity of blasting agents as compared to explosives set by the British Table of Distances. Storages for blasting agents
- (12) Where explosives and blasting agents are stored together, the lesser limit of storage applies. Where explosives and blasting agents stored together
- (13) Every such storage building shall be constructed of such materials as to ensure as far as possible against accident from any cause. Materials used in storage buildings
- (14) The requirements in reference to the care and use of explosives and blasting agents shall be kept posted up inside every such storage building. Requirements to be posted
- (15) Every such storage building shall be kept securely locked at all times that the attendant is not present and signs Buildings locked, and signs

and it shall be clearly indicated by one or more easily visible signs that explosives or blasting agents are stored therein.

- | | |
|--|---|
| Posting
of signs | (16) Such sign or signs shall be posted beside the road approaches to the building at least eight feet above the ground and twenty-five feet distant from the entrance. 1961-62, c. 81, s. 215 (13), <i>amended</i> . |
| Storages
to be
clean. etc. | 282.—(1) All explosive, blasting agent, detonator or fuse storages at or in a mine or plant shall be kept clean, dry and free from grit at all times. 1961-62, c. 81, s. 216 (1), <i>amended</i> . |
| Floors
and shelves | (2) Floors and shelves of magazines and thaw houses shall be treated with a suitable neutralizing agent, whenever necessary, to remove any traces of explosive substances. 1961-62, c. 81, s. 217. |
| What
explosives
and blasting
agents
to be used
first | 283.—(1) When supplies of explosives or blasting agents are removed from a magazine, those that have been longest in the magazine, if they are not defective, shall be used first. |
| Defective
explosives
and blasting
agents | (2) Where explosives or blasting agents become defective, they shall be suitably and safely disposed of. |
| Disposal of
defective
explosives
and blasting
agents | (3) An engineer may, if he deems it necessary to protect life or property, arrange for the disposal of defective or abandoned explosives or blasting agents, and the amount of costs so incurred shall be a debt due to the Crown from the owner or agent, recoverable in any court of competent jurisdiction. 1961-62, c. 81, s. 218, <i>amended</i> . |
| Opening
cases | 284. Only implements of wood or fibre shall be used in opening cases that contain explosives. 1961-62, c. 81, s. 219. |
| Storage of
explosives
and blasting
agents
under-
ground | 285.—(1) Explosives or blasting agents, including caps, fuses and igniter cord, shall not be stored underground in a mine in excess of the necessary underground supply for forty-eight hours. 1961-62, c. 81, s. 220 (1). |
| Storage
capacity | (2) In no case shall an amount exceeding 300 pounds of explosives or 900 pounds of blasting agents be stored in any one place underground in a mine without the written permission of the district mining engineer. 1961-62, c. 81, s. 220. |
| Written
permission
for
increased
capacity | (3) With the written permission of the district mining engineer and subject to such conditions as he prescribes, other underground explosive storages in a mine may be established, but in no case shall more |

than 1,000 pounds of explosives or 3,000 pounds of blasting agents be stored in any one storage place.

- (4) Where explosives and blasting agents are stored ^{Idem} together underground in a mine, the lesser limit of storage applies.
 - (5) Explosives and blasting agents stored underground ^{Suitable storage} in a mine shall be kept in suitable containers or storage places in suitable locations.
 - (6) Explosives or blasting agents shall not be stored ^{Protection from trains, etc.} underground in a mine in places where there is a possibility of a train or car colliding with the containers of the explosives or blasting agents.
 - (7) Where explosives or blasting agents in excess of the ^{Where excess quantities required} quantity that may be stored in approved underground storages in a mine are required for such operations as longhole blasts, etc., only such quantities as can be loaded in a twenty-four hour period shall be kept in a storage place underground at any time for such blast.
 - (8) Any explosives or blasting agents not loaded at the ^{Surplus at shift end} end of a shift shall be stored in accordance with the requirements of this section or be adequately guarded. 1961-62, c. 81, s. 220, *amended*.
- 286.—(1) Explosives or blasting agents shall not be stored ^{Location of underground storages for explosives, etc.} underground in a mine within,
- (a) 200 feet of a shaft station; or
 - (b) the distance prescribed by subsection 4 of section 560.
- (2) Detonators, blasting caps, capped fuses or igniter ^{Idem, detonators, etc.} cord, while stored underground in a mine, shall be kept in separate, suitable, closed containers or storage places.
 - (3) Such containers and storage places shall not be ^{Idem} located within twenty-five feet of any other explosives or blasting agents. 1961-62, c. 81, s. 222, *amended*.
- 287.—(1) No flame-type light shall be taken within ^{Open-flame lamps on surface} twenty-five feet of any building or place on the surface of a mine or plant in which explosives or blasting agents are stored.
- (2) No flame-type light shall be taken within ten feet of ^{Idem, underground} any place underground in a mine where explosives or blasting agents are stored unless a suitable, safe arrangement for the placing of such light is provided.

Smoking

- (3) No person shall smoke in any place or building in a mine or plant where explosives or blasting agents are stored or while handling explosives or blasting agents. 1961-62, c. 81, s. 223, *amended*.

Inspection
of storage
places

- 288.—(1) A properly authorized person or persons shall make a thorough weekly inspection of all explosives or blasting agents, explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, cap and fuse houses, and all storage boxes or places in or about the mine or plant used for the purpose of storing explosives, blasting agents, detonators or blasting caps and shall make a report in writing to the manager stating that such inspection has been made and certifying as to the conditions found.

Unsuitable
conditions
to be
rectified

- (2) The manager shall take immediate steps to correct any unsuitable conditions found and to properly dispose of any deteriorated explosives or blasting agents.

Careless
acts

- (3) The manager shall make a prompt investigation when an act of careless placing or handling of explosives or blasting agents is discovered by or reported to him.

Report of
carelessness
to engineer

- (4) Any employee who commits a careless act with an explosive or blasting agent or where explosives or blasting agents are stored, or who, having discovered such an act to have been committed, omits or neglects to report immediately such act to an officer in charge of the mine or plant, is guilty of an offence against this Act, and the officer in charge of the mine or plant shall immediately report such offence to the district mining engineer or to the Crown attorney of the county or district in which the mine or plant is situate. 1961-62, c. 81, s. 224, *amended*.

Disposal of
explosives,
etc.

- 289.—(1) When a mine or plant is closed down, all explosives, blasting agents, fuses, detonators and blasting caps shall be disposed of and no explosive or blasting agent shall be stored at any such closed-down mine or plant without the written permission of the chief engineer. 1961-62, c. 81, s. 225, *amended*.

Removal
from mine,
etc., of
explosives,
etc.

- (2) No person shall take away from a mine or plant any explosive, blasting agent, fuse, detonator or blasting cap without the written permission of the manager or of such person as is authorized by the manager to give such permission. 1961-62, c. 81, s. 226, *amended*.

- 290.—(1) No building for thawing explosives shall be maintained in connection with a mine or plant without the written permission of the district mining engineer. ^{Thaw houses}
- (2) The building shall be above ground, and the site of the building and the style of the structure and equipment shall be subject to the approval of an engineer. ^{Approval of building}
- (3) The quantity of explosives kept in a thaw house at any time shall not exceed the requirements of the mine or plant for a period of twenty-four hours plus the amount that may be necessary to maintain that supply, but the district mining engineer may give permission in writing to store a quantity not in excess of the permitted capacity of the building if, in his opinion, the heating equipment is such that the temperature can be controlled within approved safe limits. ^{Quantity stored}
- (4) A reliable recording thermometer shall be kept in the room in which explosives are thawed and the record thereof kept, but, where the amount of explosives in such thawing room does not exceed 200 pounds at any one time, the district mining engineer may give permission in writing to use a maximum and minimum registering thermometer on condition that a daily record of high and low temperatures be made and kept on file for at least one year. ^{Thermometer in thaw house}
- (5) All such records shall be made available to the district mining engineer. 1961-62, c. 81, s. 227. ^{Idem}
291. No explosives shall be thawed near an open fire or steam boiler or by direct contact with steam or hot water in a mine or plant. 1961-62, c. 81, s. 228, *amended*. ^{Prohibition}
- 292.—(1) This section applies only on mine or plant premises and only on surface. *New*. ^{Application of section}
- (2) Every motor vehicle used for transporting explosives or blasting agents shall be maintained in sound mechanical condition. 1961-62, c. 81, s. 229 (1, 2), *amended*. ^{Transportation of explosives, etc., on surface by motor vehicles}
- (3) Every such motor vehicle shall be conspicuously marked by suitable signs or red flags easily visible from front and rear. 1961-62, c. 81, s. 229 (3). ^{Markings}
- (4) The metal parts of every vehicle that may come in contact with containers of explosives or blasting ^{Metal parts to be covered}

agents shall be suitably covered with wood, tarpaulin or other suitable material.

No other goods

- (5) No other goods or materials shall be transported on any vehicle on which explosives or blasting agents are being transported.

Fire extinguisher

- (6) Every motor vehicle transporting more than 150 pounds of explosives or blasting agents shall be equipped with a fire extinguisher in working order, of adequate size and capable of dealing with a gasoline or oil fire. 1961-62, c. 81, s. 229 (4-6), *amended*.

Load limits

- (7) No motor vehicle shall be loaded with more than 80 per cent of its carrying capacity when transporting explosives or more than 100 per cent of its carrying capacity when transporting blasting agents. 1961-62, c. 81, s. 229 (7).

Load to be secured

- (8) Explosives or blasting agents transported on a vehicle shall be secured or fastened so as to prevent any part of the load from becoming dislodged.

Detonators

- (9) Detonators shall not be transported in the same vehicle as other explosives or blasting agents except in a suitable container in a separated compartment, and in such case the number shall not exceed 5,000 detonators.

Not to be unattended

- (10) A vehicle transporting explosives or blasting agents shall not be left unattended.

No surplus crew

- (11) Only those persons necessary for the handling of explosives or blasting agents shall travel on a vehicle that is transporting explosives or blasting agents.

No smoking

- (12) There shall be no smoking by persons on a vehicle that is transporting explosives or blasting agents. 1961-62, c. 81, s. 229 (8-12), *amended*.

Transportation of explosives, etc., in shaft conveyances

- 293.—(1) When the day's supply of explosives or blasting agents is being transported in a shaft conveyance in a mine, the person in charge of the operation shall give or cause to be given notice of the operation to the deckman and hoistman.

Authorization to handle

- (2) No person shall,
 (a) place in;
 (b) have while in; or

(c) take out of,

a shaft conveyance of a mine any explosives or blasting agents except under the immediate supervision of a person authorized for the purpose by the responsible supervisor.

- (3) No other material shall be transported with explosives or blasting agents in a shaft conveyance in a mine. 1961-62, c. 81, s. 230, *amended*. No other material in conveyance
- 294.—(1) The transfer of explosives or blasting agents from the magazine or other surface storage place at a mine or plant shall be so arranged that no undue delay will occur between the time the explosives or blasting agents leave the surface storage place and the time they are properly stored in designated storage places in the mine or plant or distributed to points of use in the mine or plant. Transfer of explosives or blasting agents from storage places
- (2) Explosives or blasting agents shall not be left at a level station or near the shaft collar or other entrance to a mine but shall be transferred from a designated storage place to other designated storage places or points of use without undue delay. 1961-62, c. 81, s. 231, *amended*. Transfer without undue delay
- 295.—(1) Primers shall be made up as near to their point of use as is practicable in the interests of safety and then only in sufficient numbers for the immediate work in hand. Transportation of detonators
- (2) Detonators, blasting caps, capped fuses, made-up primers, igniter cord or other explosives or blasting agents shall not be transported in a conveyance either on surface or underground at a mine or plant unless placed in separate, suitable, closed containers. Suitable containers
- (3) A person may carry capped fuses with other explosives or blasting agents from the nearest storage place at a mine or plant to the point of use without placing them in a container if they are kept separate from other explosives and blasting agents. Kept separate from other explosives or blasting agents
- (4) Made-up primers shall not be transported or carried at a mine or plant unless placed in separate, suitable, closed containers. 1961-62, c. 81, s. 232, *amended*. Made-up primers
- 296.—(1) Where explosives or blasting agents are transported in mine workings by means of mechanical haulage, including trackless equipment, the speed Transportation of explosives, etc., underground, speed and right of way

of the vehicle shall not exceed 4 miles an hour and definite arrangements for the right of way of the vehicle shall be made before the vehicle is moved.

By mechanical track haulage

- (2) Where mechanical track haulage is used in a mine,
- (a) the locomotive shall be maintained on the forward end of the train transporting explosives or blasting agents unless some person walks in advance of the train to effectively guard it;
 - (b) any car carrying explosives or blasting agents shall be separated from the locomotive by an empty car or spacer of equivalent length; and
 - (c) in no case shall explosives or blasting agents be carried on the locomotive.

By trolley locomotive haulage

- (3) Where a trolley locomotive is used in a mine, the car or cars transporting explosives or blasting agents shall be protected from trolley-wire contact and other existing hazards.

By trackless equipment

- (4) Where trackless equipment is used for the transportation of explosives underground in a mine, the requirements of section 292, except subsection 3, apply.

Idem

- (5) Where trackless equipment is used for the transportation of blasting agents in a mine, the requirements of section 292, except subsections 3 and 4, apply. 1961-62, c. 81, s. 233, *amended*.

Blasting on contiguous claims

297. Where parties working contiguous or adjacent claims or mines disagree as to the time of setting off blasts, either party may appeal to the district mining engineer, who shall decide upon the time at which blasting operations thereon may be performed, and his decision is final and conclusive and shall be observed by them in future blasting operations. 1961-62, c. 81, s. 234, *amended*.

Explosives not to be removed from original container

298. No explosive shall be removed from its original paper container or cartridge in a mine or plant. 1961-62, c. 81, s. 235.

Blasting of roast heaps

299. No explosive shall be used to blast or break up ore, salamander or other material in a mine or plant where by reason of its heated condition there is any danger or risk of premature explosion of the charge. 1961-62, c. 81, s. 236.

300. All drill holes in a mine or plant shall be of sufficient size to admit of the free insertion to the bottom of the hole of a cartridge of explosive. 1961-62, c. 81, s. 237. Size of drill holes
301. In charging holes for blasting in a mine or plant, no iron or steel tool or rod shall be used, and no iron or steel tool shall be used in any hole containing explosives. 1961-62, c. 81, s. 238. No iron or steel tools
- 302.—(1) Before drilling is commenced in a working place in a mine the exposed face shall be washed with water and carefully examined for misfires and cut-off holes, giving special attention to old bottoms. Procedure before drilling
- (2) No drilling shall be done in a mine within six inches of any hole that has been charged and blasted or any remnant of such hole. Bootleg holes
- (3) No drilling shall be done in a mine within five feet of any hole containing explosives or blasting agents, 1961-62, c. 81, s. 239 (1-3). Holes containing explosives, etc.
- (4) Drilling or undercutting and charging operations at a mine shall not be carried on simultaneously on the same face above or below each other or within twenty-five feet horizontal distance. 1961-62, c. 81, s. 239 (4), *amended*. Precautions when loading
- 303.—(1) Every blaster shall, before blasting, cause all entrances or approaches to the place where the blasting is to be done or where the safety of persons may be endangered by the blasting to be effectively guarded so as to prevent inadvertent access to such place while the charges are being blasted, including diamond drill holes as required by subsection 2 of section 273. Guarding entrances where blasting is done
- (2) Subject to permission having been obtained, when required, from the appropriate authority, where it is necessary to stop traffic on a public road during a blasting operation, Guarding roads
- (a) an adequate number of flagmen equipped with suitable red flags shall be posted; and
- (b) signs, such as "DANGER", "BLASTING" or "STOP FOR FLAGMAN", shall be posted, along the road at suitable locations to warn traffic approaching the flagman guarding the area. 1961-62, c. 81, s. 241 (1, 2), *amended*.

Signs not
adequate

- (3) Posting of signs shall not be deemed to be adequate protection for blasting operations. 1961-62, c. 81, s. 241 (3).

Due
warning
required

- (4) Every blaster shall, before blasting, give or cause to be given due warning in every direction by shouting "Fire" and shall satisfy himself that all persons have left the working place or the vicinity except those required to assist him in blasting and guarding. 1961-62, c. 81, s. 240 (1), *amended*.

Large
blasting
operations
under-
ground

- (5) Where the extent of the operation or the safeguarding of persons underground in a mine renders the warning under subsection 4 ineffective, such additional precautions to those so required shall be taken to ensure that all areas of the mine, which may be affected by the blasting operation, are vacated.

In pits and
quarries

- (6) In open pits or quarries where,
- (a) the extent of the operation or the exposure of persons renders the warning required under subsection 4 ineffective, due warning shall be given of a primary blast by siren or its equivalent in an approved manner in addition to guarding as required by subsection 1;
 - (b) personnel are required near the blast area, the manager shall provide blasting shelters or some other form of protection for employees satisfactory to the engineer. *New*.

Breaking
through
to mine
workings

304. Where possible, no connection between mine workings shall be made until a thorough examination of the working towards which the active heading is advancing has been made and has shown that the work can be proceeded with in a safe manner, and such point of connection shall be guarded as an entry when blasting within twice the length of the longest drill steel used or a minimum of fifteen feet of breaking through. 1961-62, c. 81, s. 242.

Minimum
length
of fuse

- 305.—(1) Except where fired electrically, no fuse shorter than three feet shall be used in any blasting operation in a mine or plant nor shall any fuse be lighted at a point closer than three feet from the capped end. 1961-62, c. 81, s. 243.

Detonator
required

- (2) No drill hole in a mine shall be charged with explosives or blasting agents unless a properly prepared detonating agent is placed in the charge and it shall be fired in its proper sequence in one blasting operation. 1961-62, c. 81, s. 245.

- (3) All drill holes in a mine that are charged with ^{Firing} explosives or blasting agents in one loading operation shall be fired in one blasting operation.
- (4) Any drill hole in a mine that has been charged with ^{Idem} explosives or blasting agents or any explosive charge that has been set shall not be left unfired but shall be fired at the time for blasting required by the approved practice of the mine. 1961-62, c. 81, s. 246.
- (5) Where a safety fuse is used in a blasting operation ^{Safety fuses} in a mine,
- (a) suitably capped fuses shall be supplied to the blasters in standard, uniform and safe lengths for the operation at hand; and
 - (b) the uncapped ends of all fuses for use in a mine shall be suitably identified. 1961-62, c. 81, s. 247, *amended*.
- (6) Where more than one charge is to be fired, each fuse ^{Lighting fuses} connected to a charge of explosives or blasting agents shall be lighted with a suitably-timed spitting device.
- (7) Where more than one charge is to be fired, no blaster ^{Number of men} shall be permitted to conduct any blasting operation unless he is accompanied by one or more other persons.
- (8) Every person engaged in a blasting operation shall ^{Idem, lights} carry a light unless the blasting operation is conducted on surface in daylight or under artificial light. 1961-62, c. 81, s. 248, *amended*.
- 306.—(1) Where blasting is done in a raise or stope, proper ^{Protection of entrance to working place} precautions shall be taken to prevent the closing of the means of entrance to the working place or interference with the effective circulation of air following the blast by the broken material produced by the blast.
- (2) In the case of a single-compartment raise or box-hole ^{Idem} where material from the blast may block the means of entrance, proper precautions shall be taken to ensure the adequate ventilation of the working place before a person enters it. 1961-62, c. 81, s. 250, *amended*.
- 307.—(1) Where safety fuses were used in connection ^{Interval before return to scene of blast} with a blast and two or more shots were fired, no blaster or other person shall leave or be permitted to leave his place of refuge from the blast and return

to the scene of the blast within the number of minutes that are equal to twice the number of feet in the longest fuse used in the blasting operation.

Idem

- (2) Such period of time shall be calculated from the time when the last shot was heard except where the requirements of subsection 5 apply.

Firing done electrically

- (3) Where the firing was done by means of electric delay-action detonators and any shot has been heard, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of any blast within ten minutes of the time at which the blasting circuit is closed.

Idem

- (4) Except when no shot was heard and a faulty circuit is indicated, the circuit may be repaired immediately after the blaster has assured himself that the blasting switch is locked in the open position and the lead wires are short-circuited.

Misfire or missed hole

- (5) Where a safety fuse was used and a supposed misfire or missed hole, including a reblasted misfire, occurs in a blasting operation, no blaster or other person shall leave or be permitted to leave his place of refuge and return to the scene of the blast within thirty minutes of the time of lighting of the fuse or fuses. 1961-62, c. 81, s. 244, *amended*.

Missed holes, etc.

- (6) When a blaster fires any charges, he shall, where possible, count the number of shots.

Idem

- (7) If a misfire is suspected, he shall report it to his supervisor.

Idem

- (8) If a missed hole has not been fired at the end of a shift, that fact, together with the location of the hole, shall be reported by the supervisor to the supervisor in charge of the next relay of persons going into that working place before work is commenced by them.

Idem

- (9) Any charge of explosives that has missed fire shall not be withdrawn but shall be blasted at a proper time and without undue delay, except that where a suitable device is used by an authorized person, the charge of explosives may be washed from the hole. 1961-62, c. 81, s. 251 (1-4), *amended*.

Idem

- (10) Any blasting agent that has missed fire may be washed out of the hole.

- (11) No development heading shall be abandoned or ^{Idem} work therein discontinued until the material broken at the firing of the last round has been cleared from the face and the whole face of the heading examined for explosives or blasting agents in missed or cut-off holes. 1961-62, c. 81, s. 251 (5, 6).
- 308.—(1) After the first ten feet of advance has been made ^{Where electric blasting required} in a shaft or winze and until such time as the permanent timbers and ladders have reached the level upon which blasting is being done, all blasting in the shaft, winze, station or other workings being driven therefrom shall be done by means of an electric current.
- (2) In any raise, where free escape is not ensured at all times, all blasting shall be done by means of an electric current or by an approved means initiated from a safe location outside the raise. 1961-62, c. 81, s. 252, *amended*. ^{Blasting in raises}
309. Where blasting is done by means of an electric current, a person shall not enter or allow other persons to enter the place where the charges have been fired until he has disconnected and short-circuited the firing cables or wires from the blasting machine or portable direct-current battery or has assured himself that the switch of the approved blasting switch is open, the firing cables or wires short-circuited and the blasting box locked. 1961-62, c. 81, s. 253, *amended*. ^{Electric current to be disconnected after blasting}
- 310.—(1) Where the source of current is a portable direct-current battery or a blasting machine, the firing cables or wires shall not be connected to the source of current until immediately before they are required for firing the charges and shall be disconnected immediately after the connection has been made and the machine operated for firing the charges. 1961-62, c. 81, s. 255. ^{Blasting by direct current or blasting machine}
- (2) The firing cables leading to the face shall be short-circuited while the leads from the blasting caps are being connected to each other and to the firing cables. ^{Firing cables, how to be used}
- (3) The short-circuit shall not be removed until the blaster and other persons have retreated from the face and it shall be so located that a premature explosion would be harmless to the persons opening the short-circuit. ^{Idem}

- Idem (4) The short-circuit shall be replaced immediately after the cables have been disconnected from the blasting machine or the circuit from the blasting switch has been opened. 1961-62, c. 81, s. 256, *amended*.
- Idem (5) The firing cables or wires used for firing charges at one working place shall not be used for firing charges in another working place until all proper precautions have been taken to ensure that such firing cables or wires have no connection with the leads from the first working place.
- Idem (6) When firing cables or wires are used in the vicinity of power and lighting cables, the blaster shall take proper precautions to prevent the firing cables or wires from coming in contact with the lighting or power cables. 1961-62, c. 81, s. 257.
- Where electricity from supply line used (7) Where electricity, other than from a portable, hand-operated device, is used for firing charges, a fixed device of a design certified by the district electrical-mechanical engineer as meeting the requirements of section 515 shall be used.
- Idem (8) One such device shall be maintained for each individual working place in which firing is done by means of electricity using circuits complying with the requirements of section 517. 1961-62, c. 81, s. 254, *amended*.

EXAMINATION OF MINE WORKINGS AND SHAFT INSPECTION

- Examination of mine workings 311.—(1) The manager of a mine or some authorized person or persons shall examine on each working shift all parts where drilling and blasting are being carried on, shall examine at least once a week the other parts in which operations are being carried on, such as shafts, winzes, levels, stopes, drifts, cross-cuts and raises, in order to ascertain that they are in a safe condition.
- Idem, scaling (2) The manager of a mine or some authorized person or persons shall inspect and scale or cause to be inspected and scaled by a qualified person the roofs, walls and faces of all stopes or other working places as often as the nature of the ground and of the work performed necessitates. 1961-62, c. 81, s. 287, *amended*.
- Shaft inspection 312.—(1) The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to make an inspection of the shaft at least

once each week, and in addition a thorough examination shall be made at least once each month of the guides, timber, walls and hoisting compartments generally of the shaft, and a record of such inspection and examination shall be made in the Shaft Inspection Record Book by the person making the examination.

- (2) Every such manager shall keep or cause to be kept at the mine a book for each shaft termed the Shaft Inspection Record Book in which shall be recorded a report of every such examination, as is referred to in this section, signed by the persons making the examination. 1961-62, c. 81, s. 288 (1, 2), *amended*.
- (3) Such entries of examinations shall be read and initialled every week by the person in charge of the maintenance of the shaft. Entries to be initialled
- (4) A notation shall be made of any dangerous condition reported and the action taken regarding it over the signature of the person in charge of the maintenance of the shaft. Dangerous conditions noted
- (5) The Shaft Inspection Record Book shall be made available to an engineer at all times. 1961-62, c. 81, s. 288 (3-5). Available to engineer

LADDERWAYS AND LADDERS

- 313.—(1) A suitable footway or ladderway shall be provided in every shaft and winze. Ladderways in shafts and winzes
- (2) In shafts and winzes, no ladder, except an auxiliary ladder used in sinking operations, shall be installed in a vertical position. 1961-62, c. 81, s. 289 (1, 2). Not in vertical position
- (3) During sinking operations, if a ladder is not maintained to the bottom, an auxiliary ladder that will reach from the permanent ladders to the bottom shall be provided in such convenient position that it may be promptly lowered to any point at which a person is working. 1961-62, c. 81, s. 289 (3), *amended*. Sinking operations
- (4) Wherever, about shafts and winzes and headframes used in conjunction therewith, it is necessary for persons to examine or inspect appliances installed therein, suitable ladderways or stairways and platforms shall be maintained to permit such work to be carried out in a safe manner. 1961-62, c. 81, s. 289 (4). Headframes

- Partition between manway and hoisting compartments
314. The footway or ladderway in a shaft or winze shall be separated from the compartment or division of the shaft or winze in which material, conveyance or counterweight is hoisted by a suitable and tightly-closed partition in the location required by section 256, and similarly in the remaining shaft sections, or by metal of suitable weight and mesh. 1961-62, c. 81, s. 290.
- Ladderway in shaft, over 70 degrees
- 315.—(1) In a shaft or winze inclined at over 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body, and the ladders shall be so placed as to cover this opening in the platform.
- Idem, under 70 degrees
- (2) In a shaft or winze inclined at less than 70 degrees from the horizontal or in a headframe used in conjunction with the shaft or winze, the ladders may be continuous, but substantial platforms shall be built at intervals not exceeding twenty-one feet in the ladderway and shall be covered, except for an opening large enough to permit the passage of a person's body. 1961-62, c. 81, s. 291, *amended*.
- When stairway permissible
- Hand-rail
- 316.—(1) Stairways may be used in a shaft or winze inclined at less than 50 degrees from the horizontal.
- (2) All stairways in shafts and winzes shall be equipped with a suitably placed hand-rail. 1961-62, c. 81, s. 292.
- Ladderways, other mine workings
- 317.—(1) All ladderways in raises, stopes and other manways shall be installed and maintained in a safe condition to reduce to a minimum the hazard of a person falling therefrom.
- Landing platforms
- (2) In manways inclined at 70 degrees or more, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders shall be off-set at the platforms.
- Idem
- (3) In manways inclined at less than 70 degrees and more than 50 degrees, landing platforms shall be installed at intervals not exceeding twenty-one feet in the ladderway and the ladders may be continuous.
- Idem
- (4) In manways inclined at 50 degrees or less, the ladders may be continuous and no platforms are required except at points of off-set. 1961-62, c. 81, s. 293, *amended*.

318. Wire rope or strands of wire rope shall not be used ^{Wire rope ladders} or be allowed to be used for climbing purposes if they are frayed or have projecting broken wires. 1961-62, c. 81, s. 294.
- 319.—(1) Every ladder shall project at least three feet ^{Hand-rails for ladders} above its platform, except where strong hand-rails are provided. 1961-62, c. 81, s. 295.
- (2) Every ladder shall be of strong construction, shall ^{Ladders} be securely placed and shall be maintained in a safe condition.
- (3) The distance between the centres of rungs of ladders ^{Distance between rungs} shall be not more than twelve inches and not less than ten inches, and the spacing of rungs shall not vary more than one-half inch in any ladderway.
- (4) In order to give a proper foothold, the rungs of ^{Distance from wall} ladders shall in no case be closer than four inches from the wall of a shaft, winze or raise or any timber underneath the ladder. 1961-62, c. 81, s. 296, *amended*.
320. No person shall be or be permitted to be in a ladder- ^{Material handling in ladderways} way while,
- (a) a bucket is being loaded or unloaded at the top; or
- (b) a bucket or material is being hoisted or lowered. *New.*

HOISTS AND HOISTING

SINKING EQUIPMENT

- 321.—(1) After a depth of 300 feet below the sheave has ^{When crosshead required} been attained in the sinking of a vertical shaft or winze at a mine, a suitable bucket and crosshead, as referred to in subsection 2 and in section 322, shall be used. 1961-62, c. 81, s. 336 (1), *amended*.
- (2) When a closed type of crosshead is not used, the ^{Suspension, barrel-shaped bucket} bucket shall be barrel-shaped and shall be suspended by the upper rim. 1961-62, c. 81, s. 336 (2).
- 322.—(1) All sinking crossheads at a mine shall be ^{Safety appliance on crosshead} provided with a safety appliance of a design approved by the district electrical-mechanical engineer for attaching the bucket to the crosshead, so constructed that the crosshead cannot stick in the hoisting compartment without also stopping the bucket.
- (2) All crossheads shall be of a design approved by the ^{Approval} district electrical-mechanical engineer. 1961-62, c. 81, s. 337, *amended*.

SHAFT CONVEYANCES, CONSTRUCTION AND OPERATION

Protection
of men
in shaft
conveyances

323. No cage or skip shall be used in a mine for the raising or lowering of persons unless it is constructed so as to prevent any part of the body of a person riding in it from accidentally coming into contact with the timbering or sides of the shaft or winze. 1961-62, c. 81, s. 338, *amended*.

Construc-
tion of
cages and
skips, etc.

324. All cages and skips used for lowering or raising persons in a mine shall comply with the following:

1. The hood shall be made of steel plate not less than three-sixteenths of an inch in thickness or of a material of equivalent strength.
2. The cage shall be provided with sheet-iron or steel side-casing not less than one-eighth of an inch in thickness or of a material of equivalent strength, and the casing shall extend to a height not less than five feet above the floor of the cage.
3. The cage shall be equipped with doors made of suitable material that extend to a height not less than five feet above the floor.
4. The doors shall be so arranged that it is impossible for the doors to open outward from the cage.
5. Doors shall be fitted with a suitable latch and shall have a minimum clearance at the bottom.
6.
 - i. The safety catches and mechanism shall be of sufficient strength to hold the shaft conveyance with its maximum load at any point in the shaft and shall be of a type the design of which has been approved by the chief engineer.
 - ii. Such safety catches and mechanism shall not be used until approved by the district electrical-mechanical engineer and such approval shall be based upon test performance.
 - iii. Such approval shall not be considered until the safety catches and mechanism are found to function satisfactorily under load conditions during such number of tests as are required by the chief engineer, each test to consist of suddenly releasing the shaft conveyance

in a suitable manner under maximum loading conditions for persons so that the safety catches will have the opportunity to grip the guides when the conveyance is descending at maximum rated speed.

- iv. A report of such tests shall be submitted to the chief engineer.
7. Before a shaft conveyance equipped with an approved type of safety catches and mechanism is first used for the purpose of lowering and raising persons, the safety catches and mechanism shall be found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test under the same conditions as set out in paragraph 6, and a permit for the use of the conveyance for lowering and raising men shall be obtained from the district mining engineer.
8. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
9. A shaft conveyance previously permitted for use by the district mining engineer for the purpose of lowering or hoisting persons on which alterations or repairs to the safety catch mechanism necessary to rectify any distortion of the mechanism from its proven satisfactory position are made shall not be put to such use until the safety catch and mechanism have been found to function efficiently according to the requirements of the district electrical-mechanical engineer during a test made under the same conditions as set out in paragraph 6, and the district mining engineer has again issued permission for the use of the conveyance for such purpose.
10. A notation of such test shall be entered in the Hoisting Machinery Record Book and two copies of the report shall be sent to the district electrical-mechanical engineer.
11. A certificate of load capacity of the conveyance and attachments, which shall include the weight of the tail rope, if any, or other suspended load, shall be obtained from the manufacturer and made available to the district electrical-mechanical engineer.

12. Devices for attaching the conveyance to the rope shall have a factor of safety of not less than 10.

13. — (a) When newly installed, each device for attaching the rope or ropes to the conveyance shall have a factor of safety of not less than 10.

(b) When newly installed, or rebuilt, all bails, frame members and other parts affecting the safe operation of the conveyance shall have a factor of safety of not less than 10.

14. The bails and suspension gear of all shaft conveyances shall be cleaned and thoroughly inspected at least once in every twelve months and a record of such inspection shall be made in the Hoisting Machinery Record Book. 1961-62, c. 81, s. 339, *amended*.

Hoisting
without
safety
catches

325. The chief engineer may give permission in writing for hoisting men without safety catches if he is satisfied that the equipment and conditions are such that maximum safety is provided. 1961-62, c. 81, s. 340.

Operating
chairs by
lever

326. The cage shall not have chairs attached to it that are operated by a lever or a chain through or from the floor of the cage. 1961-62, c. 81, s. 341.

Automatic
operation
of chairs

327. When chairs are used for the purpose of landing a shaft conveyance at any point in a shaft or winze, other than at the lowest point of travel for a skip, they shall be so arranged that they automatically fall clear and remain clear of the hoisting compartment when the cage or other conveyance is lifted off. 1961-62, c. 81, s. 342.

Bails,
safety
latches, etc.

328. The bucket and any device such as the bail, safety latch or other attachment to the bucket shall be of a design approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 343, *amended*.

HOIST BRAKES

Brakes
required

329.—(1) Every device used for lowering into or hoisting from mine workings shall be equipped with a brake or brakes that may be applied directly to each drum so as to safely stop and hold the drum when carrying its maximum load. 1961-62, c. 81, s. 353 (1), *amended*.

- (2) The brakes shall be so arranged that they can be tested separately and, whether the hoist is at work or at rest, can be easily and safely manipulated by the hoistman when at the levers controlling the hoist. Arranged to test separately
- (3) No hoist used for lowering or raising persons or for shaft sinking shall be equipped with a brake or brakes operated by means of the hoistman's foot, unless such brake is an auxiliary electrical device. Not operated by foot
- (4) The adjustments of the brake or brakes and brake mechanism shall be maintained in such condition that the brake lever or any other part of the brake mechanism will not come to the limit of travel before the normal power of the brake or brakes is applied. Adjustments to be maintained
- (5) All brake engines shall be so equipped that, in the event of inadvertent or accidental loss of pressure in the brake system, the brakes can be applied. Loss of brake pressure
- (6) The brakes for a friction hoist shall be designed, adjusted and maintained to safely stop and hold the conveyance under all conditions of loading, direction of travel and speed. 1961-62, c. 81, s. 353 (2-6). Brake for friction hoists
- (7) At all times that persons are in or on a shaft conveyance, the hoist shall be equipped with more than one brake, each capable of safely stopping and holding the drum or drums in use. Brakes
- (8) In shaft inspection, maintenance or sinking operations, persons may be in or on a shaft conveyance attached to the fixed or clutched-in drum when changing balance. 1961-62, c. 81, s. 353 (7), *amended*. Clutched-in drum
- (9) At least one of the brakes required shall be arranged for automatic application upon operation of any of the safety devices for brake application. Automatic operation
- (10) In a brake system where weights are used to furnish auxiliary pressure on loss of air, the weights shall be tested at least once every twenty-four hours to ensure their freedom of movement. Freedom of falling weights
- (11) In the case of single drum air or steam driven hoists, automatic valves to control engine compression, arranged for operation by the safety devices, may serve as a brake. 1961-62, c. 81, s. 353 (8-10). Single drum air or steam
- (12) The arrangements mentioned in subsection 11 are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 353 (11), *amended*. Idem

HOIST CLUTCHES

Clutch-
locking
arrange-
ment

330. The device for operating the clutch of the drum shall be provided with adequate means to prevent the inadvertent withdrawal or insertion of the clutch. 1961-62, c. 81, s. 354.

Interlocking
brake and
clutch

331. The brake and clutch operating gear shall be so installed that it will not be possible to unclutch a drum unless the brake or brakes on the drum are applied, nor shall it be possible to release the brake or brakes until the clutch of the drum is engaged. 1961-62, c. 81, s. 355.

HOIST DRUMS

Securing of
drum parts

332. Such bolts and other fittings of the drums, brakes and clutches as might be a danger in the event of their becoming loosened shall be rendered secure by means of suitable locking devices other than spring lockwashers. 1961-62, c. 81, s. 356.

Slipping
of rope
on drum

333. On the drum of every hoist used for lowering or raising persons, there shall be flanges and also, if the drum is conical, such other appliances as are sufficient to prevent the rope or cable from slipping off. 1961-62, c. 81, s. 357.

Suitability
of hoist
drum for
rope

- 334.—(1) In all hoist installations, the dimensions of the drum or drums shall be suitable for the kind, diameter and length of the rope in service.

Bending
stresses
in rope

- (2) The diameters of the hoist drums shall be large enough to prevent the occurrence of unduly large bending stresses in the rope.

Rope risers

- (3) Where multiple-layer winding is used, proper arrangements shall be made and maintained to permit the rope to rise evenly from one layer to another and to wind properly without cutting down through any lower layer. 1961-62, c. 81, s. 358.

Drum hoist
installations

- 335.—(1) On and after the 15th day of June, 1948, in all installations of newly-acquired drum hoists and modifications of existing hoists designed to increase the load ratings of the hoist,

- (a) all hoist drums over sixty inches in diameter shall have grooving properly machined to fit the rope used, except that, in the case of shaft sinking, preliminary development operations and operations of a temporary nature, hoists with plain drums may be used;

- (b) the drums shall have sufficient rope-carrying capacity to permit hoisting from the lowest regular hoisting point to the highest point of travel in the shaft without the necessity of winding more than three layers of rope on the drum;
 - (c) the diameter of a hoist drum shall be not less than 80 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch and shall be not less than 60 times the diameter of the rope in use when the diameter of the rope is not greater than one inch, except that, in the case of shaft-sinking and preliminary development operations,
 - (i) a hoist may be used having a drum whose diameter is not less than 60 times the diameter of the hoisting rope in use when the diameter of the rope is greater than one inch, and
 - (ii) a hoist may be used having a drum whose diameter is not less than 48 times the diameter of the hoisting rope in use when the diameter of the rope is not greater than one inch; and
 - (d) the hoist and the head sheaves shall be so located in relation to one another as to permit the proper winding of the rope on the hoist drum.
- (2) In any change of location of a hoist installed prior to the coming into force of this section, the requirements of clause *b* of subsection 1 apply. 1961-62, c. 81, s. 359 (1, 2). Change of location
- (3) In friction hoist installations, Friction hoist installations
- (a) the drum diameter of every friction hoist installed on or after the day on which this Part comes into force shall be not less than 100 times the diameter of the rope in use;
 - (b) the hoist drive, control and brakes shall be so designed and maintained that slippage of the rope on the drum will not occur under normal operating conditions; and
 - (c) the rope treads shall be inspected regularly and maintained in good condition; 1961-62, c. 81, s. 359 (3), *amended*.

Tapered
guides

- (d) in a friction hoist installation, tapered guides or other approved devices shall be installed above and below the limits of regular travel of the conveyance and arranged so as to brake and stop an overwound or underwound conveyance in the event of failure of other devices. 1961-62, c. 81, s. 365, *amended*.

SHEAVES

Head and
deflection
sheaves

- 336—(1) Head and deflection sheaves shall be machined and maintained to fit the rope properly.

Diameter
of head
sheaves

- (2) The diameter of a head sheave shall be determined by clause *c* of subsection 1 of section 335 as required for a hoist drum. 1961-62, c. 81, s. 360 (1, 2), *amended*.

Diameter
of deflection
sheaves

- (3) The diameter of a deflection sheave shall be determined by,
 (a) in the case of a drum hoist system, clause *c* of subsection 1 of section 335; and
 (b) in the case of a friction hoist system, clause *a* of subsection 2 of section 335. *New*.

UTILITY HOISTS

Care of
utility
hoists

337. Utility hoists, including tugger hoists, ropes and other equipment used in connection with the installation, shall be maintained in a safe working condition. 1961-62, c. 81, s. 277, *amended*.

INDICATORS

Indicator
required

- 338.—(1) Every hoist shall, in addition to any marks on the rope or drum, be provided with a reliable depth indicator that will clearly and accurately show to the operator,
 (a) the position of the bucket, cage or skip;
 (b) at what position in the shaft a change of gradient necessitates a reduction in speed;
 (c) the overwind or underwind position of the shaft conveyance or counter-balance; and
 (d) the position above or below the limits as in clause *c* beyond which the conveyance is not to move. 1961-62, c. 81, s. 363 (1), *amended*.

Operation
of indicator

- (2) Hoist depth indicators shall be driven by a reliable means.

Means
to adjust
indicator
on friction
hoist

- (3) Means shall be provided on a friction hoist to adjust the depth indicators and protective devices on the hoist to the position of the conveyance in the shaft. 1961-62, c. 81, s. 363 (2, 3).

OVERWINDING, ETC. — AIR HOISTS AND STEAM HOISTS

339. Air hoists and steam hoists shall be provided with suitable overwind, underwind and emergency protection for the hoisting conveyance, except that, in shaft-sinking, the underwind protection is not required. 1961-62, c. 81, s. 361, *amended*. Overwind and underwind protection
340. At all air hoists and steam hoists, there shall be installed within plain view of the operator a gauge to indicate the air or steam pressure, as the case may be. 1961-62, c. 81, s. 362, *amended*. Gauge required

SPECIFICATIONS AND SPECIAL TESTING

- 341.—(1) The specifications of hoists and equipment and the general arrangement of the headframe in new installations and in shaft deepening projects shall be approved by the chief engineer. Specifications required
- (2) Before a new hoisting installation is put in service, tests shall be conducted to prove its compliance with this Act. Commissioning tests
- (3) A record of such tests and the results obtained shall be kept on file and made available to the district electrical-mechanical engineer. Record kept available
- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific tests of the efficiency of all brakes, clutches, overwind devices or other hoist controls. 1961-62, c. 81, s. 364, *amended*. Special testing by the district electrical-mechanical engineer
- 342.—(1) All shafts, drums, mechanical linkage for controls, brake rods and other vital parts of a mine hoist which could affect the safety of the equipment shall be non-destructively tested before the hoist is placed in service. New equipment
- (2) Hoist and sheave wheel shafting, hoist brake and mechanical linkage for controls, conveyance drawbars, pins and structural members and other hoisting equipment affecting the safety of the installation shall be non-destructively tested at regular intervals or as required by the district electrical-mechanical engineer. Equipment in service

Reports
of tests

- (3) Dates of the non-destructive testing shall be recorded in the Machinery Record Book and the results shall be reported to the district electrical-mechanical engineer.

Approved
methods

- (4) The non-destructive testing shall be carried out by methods acceptable to the chief engineer. *New.*

EXAMINATION

Examina-
tion of
hoisting
equipment

343. The manager of a mine where a hoist is in use shall depute some competent person or persons whose duty it is to examine at least once in each week,

- (a) deflection, head and idler sheave wheels;
- (b) attachments of the hoisting ropes to the drums and to the counterweights, buckets, cages or skips;
- (c) brakes;
- (d) interlocks;
- (e) depth indicators;
- (f) buckets;
- (g) counterweights;
- (h) cages;
- (i) skips;
- (j) external parts of the hoist;
- (k) mechanical hoisting signalling equipment, if any;
- (l) shaft dumping and loading arrangements;
- (m) sinking doors and blasting sets, and any attachments thereto;
- (n) attachments to any cage, skip or bucket for any underslung regularly-used equipment; and
- (o) guide or rubbing rope tensioning devices and attachments,

and to record the report of such examination in a book called the Hoisting Machinery Record Book. 1961-62, c. 81, s. 366, *amended*.

HOISTING MACHINERY RECORD BOOK

- 344.—(1) The manager shall keep or cause to be kept at the mine the Hoisting Machinery Record Book referred to in section 343, in which shall be entered a report of every examination or report referred to in sections 324 and 343, subsection 2 of section 355, subsection 3 of section 359 and sections 360 and 361, and a notation of any failure of, accident to, correction or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, signed by the person making the examination or report. ^{Entering of reports}
- (2) Such entries shall be read and signed each day, week or month, as required by this Act, by the person in charge of such equipment or accessories thereto. ^{Entries to be signed}
- (3) A notation shall be made in the Hoisting Machinery Book of the action taken regarding the report of any failure of, accident to, corrections or repairs to the hoist, the ropes, the shaft conveyance or any other part of the hoisting, dumping or loading equipment, over the signature of the person in charge of such equipment or accessories thereto. ^{What to be entered}
- (4) The Hoisting Machinery Record Book shall be made available to the engineer at all times. 1961-62, ^{Books to be available} c. 81, s. 386, *amended*.

HOISTING ROPES

- 345.—(1) The connecting device between the hoisting rope and the bucket, cage, skip, counterweight or other device shall be of such nature that the risk of accidental disconnection is reduced to a minimum. ^{Rope connection}
- (2) Such connecting device shall be of a design approved by the chief engineer. ^{To be approved}

No open hooks	(3) No open-hook device shall be used for such purpose.
Fastened to spider on a drum hoist	(4) The drum end of the rope shall be fastened to the spider of the drum or around the drum shaft in some suitable manner. 1961-62, c. 81, s. 368, <i>amended</i> .
Counter-weight	(5) The rope from the counterweight shall be attached to the drum of the hoist and not to the shaft conveyance in drum hoist installations. 1961-62, c. 81, s. 384.
Splicing prohibited	346. In no case shall a rope that has been spliced be used for hoisting purposes. 1961-62, c. 81, s. 369.
Length of rope required on drum hoist	347.—(1) No drum hoist shall be operated with less than three turns of rope on the drum when the bucket, cage or skip is at the lowest point in the shaft from which hoisting is effected.
Three layers only on drum	(2) No drum hoist shall be operated with more than three complete layers of rope on the drum when the conveyance is at the highest point of travel in the shaft. 1961-62, c. 81, s. 370, <i>amended</i> .
Test certificate	348.—(1) No hoisting rope, tail rope, guide rope, or rubbing rope shall be used that has not been tested by the Ontario Government Cable Testing Laboratory and for which a certificate of the test is not in the possession of the user.
Number of test specimens required	(2) In friction hoist installations, where multiple ropes are used and when manufactured have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes, <ul style="list-style-type: none"> (a) in the case of four ropes, two specimens shall be required; (b) in the case of three ropes, two specimens shall be required; (c) in guide and rubbing rope installations and where these ropes have been laid up continuously, a specimen shall be submitted for test, cut from the portion between each pair of ropes.
Manufacturer's certificate	(3) No hoisting rope, tail rope, guide rope or rubbing rope shall be used that is not accompanied by a certificate from the manufacturer giving the following information:

1. Name and address of manufacturer.
 2. Manufacturer's rope number.
 3. Date of manufacture.
 4. Diameter of rope in inches.
 5. Weight per foot in pounds.
 6. Rope construction.
 7. Class of core.
 8. Trade name of interior rope lubricant.
 9. Number of wires in strand.
 10. Grade of steel.
 11. Diameter of wires in decimals of an inch.
 12. Breaking stress of steel of which the wire is made in pounds per square inch.
 13. Standard torsion test of wires.
 14. Actual breaking load of rope, as provided by the certificate referred to in subsection 1.
 15. Length of rope.
- (4) When a rope is put into service in a shaft compartment or hoisting way, the data mentioned in subsection 3 shall be entered in a book called the Rope Record Book, together with the following information: Rope data to be entered in Rope Record Book
1. Name of person from whom purchased.
 2. Date of purchase.
 3. Date put on in present location.
 4. Identification number of rope.
 5. Name of shaft or winze and compartment in which rope is used.
 6. Weight of shaft conveyance.

7. Weight of material carried, or weight or tension applied to guide or rubbing rope.
8. Maximum length of rope in service below sheave or total length of guide or rubbing rope.
9. Maximum weight of rope in service below sheave or total weight of guide or rubbing rope.
10. Static factors of safety at conveyance suspension and at head sheave with rope fully let out, or at guide or rubbing rope suspension point.
11. Date put on and removed from previous locations, if any.

Information
to be sent
to chief
engineer

- (5) A copy of such entries shall be forwarded to the chief engineer at the time the rope is put on in any location.

Rope
Record
Book

- (6) The manager shall keep or cause to be kept at the mine a book called the Rope Record Book, in which shall be recorded, in addition to the information referred to in subsections 3 and 4, the following information:

1. A history of the rope, giving the date on which the rope was first put on.
2. Dates of shortening.
3. Dates and results of breaking and electromagnetic tests.
4. Date and reason for taking out of service, for each occasion the rope is put into and taken out of service.

Rope
Record
Book
open to
engineer

- (7) The Rope Record Book shall be available to the district electrical-mechanical engineer.

Notification
of rope
discarded

- (8) When a hoisting rope, tail rope, guide or rubbing rope is taken out of service from a shaft compartment, notice to that effect shall be forwarded to the chief engineer, giving the date, the reasons for discarding or discontinuing the use of the rope, disposition of the rope, and such other information as he requires. 1961-62, c. 81, s. 371, *amended*.

- 349.—(1) No hoisting rope, tail rope, guide or rubbing rope that has previously been in use in a place beyond the control of the manager shall be put in service anew, except with the permission in writing of the chief engineer. Permission required to use old rope
- (2) Request for permission to use such rope shall be accompanied by certification that the rope has been properly examined and that no apparent defects have been found. Request for permission
- (3) The rope shall be electro-magnetically tested throughout its length and copies of the results, together with the interpretations, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test was made. 1961-62, c. 81, s. 372, *amended*. Electro-magnetic test
350. No hoisting rope, tail rope, guide or rubbing rope that has been removed from service shall be put in service anew for the purpose of lowering or raising persons, unless proper measures have been taken for the maintenance of the rope and the manager is satisfied that the rope is in safe working condition. 1961-62, c. 81, s. 373, *amended*. Precautions, used ropes
351. When a shaft compartment has been abandoned for hoisting purposes, the hoisting rope shall be removed immediately from the shaft. 1961-62, c. 81, s. 374, *amended*. Rope removal
352. No hoisting rope shall be reversed until approval in writing has been received from the chief engineer. 1961-62, c. 81, s. 375, *amended*. Rope not to be reversed
- 353.—(1) For the purpose of this section, the factor of safety of the hoisting rope, tail rope, guide or rubbing rope in a shaft or winze of a mine means the number of times the breaking strength of the rope is greater than the total weight supported by the rope at a definite place in the rope. Safety factor of ropes, interpretation
- (2) The breaking strength of the rope means the breaking strength of the rope as shown in the test certificate issued by the Ontario Government Cable Testing Laboratory before the rope is installed, as required by subsection 1 of section 348. Breaking strength of ropes, interpretation

Safety
factor of
drum hoist
ropes

- (3) Every hoisting rope, when newly installed on a drum hoist, shall have a factor of safety of not less than 8.5 at the end of the rope where it is attached to the conveyance and where the total weight consists of the combined weight of the conveyance and the maximum load to be carried.

Idem

- (4) In addition, the hoisting rope, when newly installed, shall have a factor of safety of not less than 5 at the point where the rope leaves the head sheave and, the rope being fully let out, the total weight consists of the combined weight of the conveyance plus the maximum load to be carried plus the weight of that part of the rope that extends from the head sheave to the conveyance.

Safety
factor for
friction
hoist ropes

- (5) The factor of safety of the hoisting ropes for a given friction hoist installation is the lowest actual breaking strength, as determined by the Ontario Government Cable Testing Laboratory, for the ropes, times the number of ropes, divided by the sum weight of the conveyance and attachments, the maximum conveyance load carried and the maximum weight of rope suspended in one compartment of the shaft.

Idem

- (6) When the hoisting rope is installed on a friction hoist, the factor of safety shall be not less than that determined from the following formula: $F. \text{ of } S. = 8.0 - .0005 d$, where d is the maximum length of rope suspended below the head sheave in feet.

Idem

- (7) For friction hoists, the factor of safety of the hoisting ropes shall be not less than 5.5 for any depth of shaft when the ropes are installed.

Safety
factor of
tail ropes

- (8) The factor of safety of tail ropes shall be not less than 7 when installed.

Safety
factor of
guide and
rubbing
ropes

- (9) The factor of safety of guide and rubbing ropes shall be not less than 5 when installed. 1961-62, c. 81, s. 376, *amended*.

Rope
discard
criteria

- 354.—(1) No hoisting rope shall be used in a shaft or winze of a mine where in any part of the rope,
- (a) the existing strength has decreased to less than 90 per cent of the original strength of the rope;
 - (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;

- (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
 - (d) marked corrosion occurs;
 - (e) the rate of stretch in a friction hoisting rope begins to show a rapid increase over the normal stretch noted during its service. 1961-62, c. 81, s. 377, *amended*.
- (2) No tail rope, guide or rubbing rope shall be used in a ^{Idem} shaft where in any part of the rope,
- (a) the existing strength has decreased to less than 75 per cent of the original strength of the rope;
 - (b) the extension of a test piece has decreased to less than 60 per cent of its original extension when tested to destruction;
 - (c) the number of broken wires in any section of the rope equalling the length of one lay of the rope exceeds six;
 - (d) marked corrosion occurs. *New*.
- 355.—(1) The rope dressing used on a drum hoisting ^{Rope dressing} rope shall be suited to the operating conditions of the rope, and the dressing shall be applied at least once in every month and as often as is necessary to maintain the coating on the rope in good condition.
- (2) Every time the rope is dressed, a report of the ^{Idem} treatment shall be recorded in the Hoisting Machinery Record Book and signed by the person who performed the work. 1961-62, c. 81, s. 378.
- 356.—(1) After 18 months of service, and thereafter at ^{Testing of hoisting ropes} intervals of six months, the hoisting rope of a drum hoist shall have a portion not less than 8 feet in length cut off the lower end from a position above the clamps or other attachment.
- (2) The portion of rope so cut shall have the ends adequately fastened with binding wire before the cut is made to prevent the disturbance of the strands and it shall be sent to the Ontario Government Cable Testing Laboratory for a breaking test. 1961-62, c. 81, s. 379 (1, 2), *amended*.

- | | |
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| Recording
of test | (3) The certificate of the test shall be kept on file and a summary thereof recorded in the Rope Record Book. 1961-62, c. 81, s. 379 (4). |
| Electro-
magnetic
testing | (4) All hoisting ropes on drum hoists and friction hoists shall be tested throughout their working length by an electro-magnetic testing device within the first six months of service, and thereafter at intervals of four months, or as required by the chief engineer. |
| Idem | (5) All tail ropes, guide and rubbing ropes shall be electro-magnetically tested at the end of twelve months service, and thereafter at such intervals as is necessary to ensure that the rope is in safe condition. |
| Idem | (6) The electro-magnetic testing service and the agency or company supplying such service shall be approved by the chief engineer. |
| Tests to be
recorded | (7) The dates and results of the electro-magnetic tests shall be entered in the Rope Record Book. |
| Submission
of results | (8) Records of each electro-magnetic test, including graphs and interpretations, over the signature of the person making the interpretation, shall be sent to the chief engineer and to the district electrical-mechanical engineer within fourteen days after the test is made. <i>New.</i> |
| Special
testing
of used
hoisting
ropes | 357.—(1) The chief engineer may require that test specimens be cut from any rope discarded for use in mine hoisting at points specified by him and sent to the Ontario Government Cable Testing Laboratory for special testing and investigation if he is of the opinion that such testing and investigation are in the interests of better mine hoisting practice. |
| No charge
for testing | (2) No charge shall be made for such special testing and investigation, but the mine is responsible for the cost of cutting, preparation and shipment of the test specimens. 1961-62, c. 81, s. 380, <i>amended</i> . |

CLEARANCE FOR TAIL ROPES

- | | |
|---------------------------|--|
| Tail ropes
to be clear | 358. Water and spillage in a shaft sump in a mine shall be kept at such a level at all times that, <div style="margin-left: 40px;"> (a) tail ropes have clear passage; and
 (b) guide and rubbing rope connections and tension devices are clear. 1961-62, c. 81, s. 381, <i>amended</i>. </div> |
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ROPE ATTACHMENTS

- 359.—(1) Any rope in hoisting service when newly put on, and after any subsequent loosening of the connecting attachments between the rope and the bucket, cage, skip or counterweight and the connection between the rope and the hoist drum, shall have the attachments carefully examined by a qualified person or persons authorized by the manager and shall not be used for ordinary transport in a shaft or winze until two complete trips up and down the working parts of the shaft or winze have been made with the bucket, cage, skip or counterweight bearing its authorized load, and the connecting attachments have been re-examined. 1961-62, c. 81, s. 382 (1), *amended*. Examination of attachments
- (2) The hoistman shall make a record of such two complete trips in the Hoistman's Log Book. Record to be kept
- (3) The results of the examination of the connecting attachments between the bucket, cage, skip or counterweight and hoist drum and the rope shall be recorded in the Hoisting Machinery Record Book and signed by the person making the examination. 1961-62, c. 81, s. 382 (2, 3). Results to be recorded
- 360.—(1) In drum hoist installations, after every six months of service, that portion of the rope at the conveyance end within the clamps shall be cut off and discarded. Cleaning and examination of rope connections
- (2) At such time, the connection between the rope and the drum shall be thoroughly cleaned and examined. Idem
- (3) In friction hoist installations, after every six months of service, the position of the hoisting rope within the clamps shall be changed, if practicable, or that portion of the rope within the clamps shall be thoroughly cleaned and examined. Idem
- (4) Every six months, the tail rope, guide and rubbing rope attachments and tensioning devices shall be thoroughly cleaned and examined. 1961-62, c. 81, s. 383, *amended*. Idem

EXAMINATION OF ROPES AND SAFETY APPLIANCES

- 361.—(1) The manager shall depute a competent person or persons who shall examine, Examination of ropes and safety appliances

- (a) at least once in each day, the exterior of the hoisting rope and tail rope to detect the presence of kinks or other visible damage and to note the appearance of the rope dressing;
- (b) at least once in each month, the structure of that portion of the hoisting rope that is not on the hoist drum when the conveyance is at its lowest stopping point, and the tail, guide and rubbing ropes, with a view to ascertaining the deterioration thereof, and for the purpose of this examination the rope shall be cleaned at points selected by such person or persons, who shall note any reduction in the diameter or circumference of and the proportion of wear in the rope, and the starting point of the examination shall be changed slightly from month to month in order to obtain more complete information, but any portion showing appreciable reduction in diameter or circumference or appreciable wear shall be checked when the rope is again examined;
- (c) at least once in each month, the portion of the rope that normally remains on the drum of a drum hoist when the conveyance is at its lowest stopping point, and shall lubricate such portion, and, if, during the examination of the rope, significant deterioration is found in the portion on the drum or at the cross-over points, the rope shall be shortened sufficiently to eliminate any crushed portion or to change the position of the cross-over points if either or both are necessary;
- (d) at least once in each day, the safety catches, if any, of the conveyance, to be sure they are clean, sharp and in proper adjustment and working condition;
- (e) at least once in every three months, the safety catches of the cage or other shaft conveyance so equipped by testing the same, such test to consist of releasing the empty conveyance suddenly in some suitable manner from rest so that the safety catches have the opportunity to grip the guides, and, in case the safety catches do not act satisfactorily, the cage or other shaft conveyance shall not be used further for lowering or raising men until the

safety catches have been repaired and have been proved to act satisfactorily, as referred to in paragraph 9 of section 324. 1961-62, c. 81, s. 385 (1), *amended*.

- (2) In friction hoist installations, the stretch of the hoisting rope or ropes shall be measured and recorded in the Friction Hoist Machinery Record Book. Stretch to be recorded
- (3) In friction hoist installations, measurement of rope diameters and the location and number of broken wires shall be recorded monthly in the Friction Hoist Machinery Record Book. 1961-62, c. 81, s. 385 (2, 3). Rope diameters and broken wires to be recorded
- (4) If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or cause to be conducted specific tests of the safety catches with which a conveyance is equipped. Engineer may conduct tests
- (5) If on examination there is discovered any weakness or defect whereby the safety of persons may be endangered, the weakness or defect shall be immediately reported to the manager or person in charge and, until the weakness or defect is remedied, the hoisting plant shall not be used. 1961-62, c. 81, s. 385 (4, 5), *amended*. Defects to be remedied at once
- (6) It is the duty of the person referred to in subsection 1 to record the reports of all examinations therein referred to and also to record all reports referred to in subsection 5 in a book called the Hoisting Machinery Record Book or the Friction Hoist Machinery Record Book, whichever is applicable. 1961-62, c. 81, s. 385 (6). Recording of examination and reports

HOIST LOADING

362.—(1) In this section,

Interpre-
tation

- (a) "authorized maximum load of persons" means the total weight of persons permitted by the district mining engineer to be carried at any time in the shaft conveyance;
- (b) "maximum allowable weight" means the maximum weight permitted by this Part to be attached to the rope in service or the maximum weight attached to the rope that the hoist is capable of handling or the maximum weight of material that the conveyance is capable of handling whichever is the least. 1961-62, c. 81, s. 318 (1), *amended*.

Rated
loading,
drum hoists

- (2) Every drum hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum permissible rope pull for each drum and the maximum permissible suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. 1961-62, c. 81, s. 367 (1), *amended*.

Rated
loading,
friction
hoists

- (3) Every friction hoist shall be accompanied by a certificate from the manufacturer, or an independent person approved by the chief engineer, giving the maximum rated unbalanced load and the maximum rated suspended load of the hoist, and the hoist shall not be loaded beyond the maximum loads so specified. *New*.

Approval
for
increased
capacity

- (4) No alterations designed to increase the hoisting capacity shall be made to a hoist unless approval is given by its manufacturer or an independent person approved by the chief engineer. 1961-62, c. 81, s. 367 (2), *amended*.

Determina-
tion of
maximum
load on
conveyance,
drum hoists

- (5) Except as provided in clause *b* of subsection 1, the maximum allowable load to be lowered or raised on the shaft conveyance of a drum hoist means the maximum allowable weight at the end of the rope less the weight of the conveyance.

Idem,
friction
hoists

- (6) The maximum material-load allowed on the conveyance of a friction hoist shall be determined from the lesser of the following calculations:

1. Maximum allowable suspended load on the hoist, less the weight of the hoisting ropes, less the weight of tail ropes, less the weight of the conveyances and the attachments.
2. The breaking strength of the rope, divided by the required factor of safety, minus the maximum weight of rope suspended in one compartment, minus the weight of the conveyance and attachments in that compartment; and, where multiple ropes are used, the lowest breaking strength of any rope shall be used for all ropes in load calculations.
3. The unbalanced load on the hoist as rated by the manufacturer, which shall not be exceeded.

4. The maximum allowable load on any conveyance, which shall not be greater than that for which the conveyance was rated by the manufacturer. 1961-62, c. 81, s. 318 (7), *amended*.
- (7) Where a shaft conveyance is used for the lowering or raising of both persons and materials, the weight on the conveyance when handling its authorized maximum load of persons, shall not exceed 85 percent of the maximum allowable weight permitted for materials. 1961-62, c. 81, s. 318, (3, *part*, 4), *amended*. Maximum persons load when conveyance also used for materials
- (8) The manager shall obtain from the district mining engineer resident in the district a certificate in writing setting out the maximum loads of persons or materials that may be carried in the shaft conveyance before persons are so carried. 1961-62, c. 81, s. 318 (3), *part*, *amended*. Certificate respecting maximum loads
- (9) The district mining engineer may issue the certificate referred to in subsection 8 if he is satisfied that the hoisting installation and signalling equipment meet the requirements of this Act. 1961-62, c. 81, s. 318 (5), *amended*. When certificate issued

SHAFT HOISTING PRACTICE

- 363.—(1) The hoisting of persons or materials in a mine shaft by automatic control is subject to the approval of the chief engineer. Hoisting by automatic control
- (2) Where a hoist in a mine is being operated by automatic control and no other means of hoisting persons is provided, there shall be available a person qualified to operate the hoist manually when persons are underground. 1961-62, c. 81, s. 303, *amended*. Idem
- 364.—(1) Where steel, timber or other material is being lowered or raised in a shaft conveyance in a mine, it shall be loaded in such a manner as to prevent it from shifting its position, and, if necessary, it shall be secured to the conveyance. Lowering and raising material

Long
material
properly
secured

- (2) When such material projects above the sides of the conveyance, it shall be securely fastened to the conveyance or lashed to the hoisting rope in such a manner as not to damage the rope. 1961-62, c. 81, s. 304, *amended*.

Compartment to be lined where crosshead not used

365. Where a crosshead is not used in a vertical shaft or winze in a mine, the compartment in which the bucket works shall be closely lined with sized lumber. 1961-62, c. 81, s. 305, *amended*.

Level of load in bucket or skip

366. In the course of sinking a shaft or winze in a mine, the bucket or skip shall be filled only in such a manner that no piece of loose rock projects above the level of the brim. 1961-62, c. 81, s. 306, *amended*.

Hoisting men in buckets

367. In shaft-sinking operations in a mine, where the hoisting speed exceeds 1,000 feet per minute, persons shall ride in the bucket above the bottom crosshead stop. 1961-62, c. 81, s. 307, *amended*.

Lowering men after blast

- 368.—(1) During sinking operations in a shaft or winze in a mine, the bucket or skip used for returning persons to the working place following a blasting operation shall not be lowered on the initial trip beyond the point where, owing to the blast, it may be unsafe to go without a careful examination, and in no case shall the point be less than fifty feet above the blasting set or bulkhead.

Idem

- (2) The bucket or skip shall be lowered from such point only on signal from the persons accompanying it and at such speed as to be fully under control, by signal, of such persons.

Idem

- (3) Only sufficient persons shall be carried on such a trip as are required to properly conduct a careful examination of the shaft or winze. 1961-62, c. 81, s. 308, *amended*.

Bucket or skip not to be lowered directly to face

369. In the course of sinking a shaft or winze in a mine, the bucket or skip shall not be lowered directly to the bottom but shall be held at least fifteen feet above the bottom and shall remain there until a separate signal to lower it has been given by an authorized person. 1961-62, c. 81, s. 309, *amended*.

Bucket to be steadied

370. No bucket shall be allowed to leave the top or bottom of a shaft or winze in a mine until the person in charge of it has steadied it or caused it to be steadied. 1961-62, c. 81, s. 310, *amended*.

- 371.—(1) In the course of sinking a shaft or winze in a mine, adequate provision shall be made and maintained to ensure the impossibility of the bucket or skip being dumped while the dumping doors are open and means shall be applied to prevent spillage from falling into the shaft or winze. ^{Protection from dumping}
- (2) A door or doors to cover the sinking compartments shall be provided and maintained at the collar or other point of service of every shaft or winze in a mine while sinking is in progress. ^{Door to cover sinking compartment}
- (3) The design of the things required under subsections 1 and 2 shall be submitted for the approval of the district electrical-mechanical engineer before such things are installed. ^{Design to be approved}
- (4) The door or doors referred to in subsection 2 that are at the point of loading shall be kept closed when tools or material are being loaded into or unloaded from the bucket or skip, except when the bucket or skip is unloaded by dumping arrangements as provided for in subsection 1. ^{Doors to be closed}
- (5) The door or doors referred to in subsection 2 shall be closed when persons are loaded or unloaded, except where a safety crosshead fills the compartment at the collar or other point of service. 1961-62, c. 81, s. 311, *amended*. ^{Idem}
- (6) Any doors or other shaft fixture which when moved into the travel area of a shaft compartment would interfere with free passage of the conveyance shall be so equipped that their position is indicated to the hoistmen by signal lights. *New*. ^{Warning of obstruction}
372. Except during sinking operations, whenever a mine shaft or winze exceeds 300 feet in vertical depth, a suitable cage or skip constructed as required by sections 323 and 324 shall be provided for lowering or raising men in the shaft or winze. 1961-62, c. 81, s. 312, *amended*. ^{Cage for handling men}
- 373.—(1) No person shall travel or be permitted to travel in a cage at any time, except during shaft inspection, unless the doors of the cage are securely closed. 1961-62, c. 81, s. 313 (1). ^{Cage doors to be closed}
- (2) The doors of a cage shall not be opened until a full stop has been made at the point or station signalled except, ^{Idem}

(a) during trips of inspection; and

(b) as permitted by subsection 3. 1961-62, c. 81, s. 313 (2), *part, amended*.

Idem

(3) In the case of an inadvertent stop at a point in the shaft or winze other than a station, the cage doors may be opened and then persons may leave the cage only on the instructions of an authorized person outside the cage. 1961-62, c. 81, s. 313 (2), *part, amended*.

Operation
of chairs

374.—(1) Where chairs are used for the purpose of landing a shaft conveyance at a point in a shaft or winze, except when hoisting in balance from that point, the chairs shall not be put into operation unless the proper charring signal has been given to the hoistman.

Idem

(2) Chairs shall not be used when persons are in or on a shaft conveyance. 1961-62, c. 81, s. 314, *amended*.

Hoisting
persons and
material
simul-
taneously

375.—(1) Except as provided for in clause *c* of section 376, no person shall travel or be permitted to travel in a bucket, cage or skip operated by a hoist that is being simultaneously used for the hoisting of mineral or material.

Persons
only in
approved
conveyances

(2) No person shall be lowered or raised or permit himself to be lowered or raised in a shaft or other underground opening except in an approved raise climber, or a scaling platform, or in an approved hoisting conveyance as provided for in section 376, but this prohibition does not apply where persons are lowered or raised by hand or by means approved by the district electrical-mechanical engineer for use in construction, maintenance or repair work. 1961-62, c. 81, s. 315, *amended*.

When
persons
not to be
hoisted

376. No person shall be lowered or raised or allow himself to be lowered or raised in a shaft, winze, or other underground opening of a mine,

(a) in a bucket or skip, except that persons employed in shaft sinking may ascend and descend to and from the sinking deck or other place of safety and the persons employed in shaft inspection and maintenance may be lowered or raised in the shaft by means of such conveyance;

- (b) in a cage or skip that does not meet the requirements of sections 324 and 326, except as provided for in clause *a* of this section or section 325;
 - (c) in a cage, skip or bucket that is loaded with explosives or blasting agents, steel, timber or other material or equipment, except where such person is authorized to handle such material in a cage, skip or bucket and the materials are adequately secured as required by section 364, but nothing in this clause prohibits persons from carrying personal hand tools or equipment approved by the district mining engineer in a shaft conveyance if such tools or equipment are properly protected with guards and the conveyance is not overcrowded;
 - (d) in any shaft conveyance, except during shaft sinking operations or shaft inspection and maintenance operations, except where a person authorized to give signals is in charge of the shaft conveyance. 1961-62, c. 81, s. 316, *amended*.
377. Except in the course of sinking a shaft in a mine, no person shall enter or be allowed to enter a shaft conveyance or work upon or under a shaft conveyance when the corresponding drum of the hoist is unclutched, unless the conveyance is first secured in position by chairing or blocking. 1961-62, c. 81, s. 317, *amended*. Use of conveyance if drum unclutched
378. Permission shall be obtained from the chief engineer before a skip or bucket is used for lowering or raising persons in a shaft or winze of a mine, except during sinking, inspection or maintenance operations. 1961-62, c. 81, s. 338 (2), *amended*. Permission necessary to handle men in skip or bucket
379. Where a bucket is used in a shaft or winze in a mine for other than sinking purposes, Use of shaft buckets
- (a) a set of doors as required by subsection 2 of section 371 shall be installed at the collar and every point of service of the shaft or winze;
 - (b) a suitable landing device shall be used at every working level when the bucket is being loaded or unloaded at that level; and

- (c) simultaneous operations shall not be carried on at more than one level until the style of structure and method of operation of any such device installed at intermediate levels have been submitted to and have received the approval of the district mining engineer. 1961-62, c. 81, s. 270, *amended*.

CONVEYANCE NOTICES AND DISCIPLINE

Notice
to be
posted

- 380.—(1) A notice showing clearly the number of persons allowed to be carried in and the weight of materials allowed to be loaded on the conveyance, as referred to in subsection 6 of section 362, shall be posted and maintained at the collar of the shaft or winze.

Respons-
ibility

- (2) The person authorized to give signals is responsible for the observance of such notice. 1961-62, c. 81, s. 319, *amended*.

Lamps

- 381.—(1) When persons are being lowered or raised in a cage or skip, no person, other than the cagetender or skiptender, shall have a burning open-flame lamp of any kind, except that, for shaft inspection or similar purposes, a sufficient number of lighted lamps shall be permitted.

Discipline
to be
maintained

- (2) When persons are being lowered or raised in a cage or skip a proper discipline of the persons riding in the cage or skip shall be maintained.

Obstruction
prohibited

- (3) No person shall obstruct the enforcement of the requirements of subsection 1 of section 380 or this section. 1961-62, c. 81, s. 320, *amended*.

SIGNALS

Signal
systems

382. Every working shaft in a mine shall be provided with a suitable means of communicating by distinct and definite signals to the hoist room from the bottom of the shaft, from every working level, from the collar and from every landing deck. 1961-62, c. 81, s. 321, *amended*.

Separate
system
for each
compart-
ment

383. A separate, audible signal system shall be installed for the control of each hoisting conveyance operated from a single hoist in a mine, and there shall be a sufficient difference in the signals to the hoistman so that they are easily distinguishable. 1961-62, c. 81, s. 322, *amended*.

- 384.—(1) Where an electrical signal system is installed in a mine, the hoistman shall return the signal to the person giving the signal when persons are about to be lowered or raised. 1961-62, c. 81, s. 323, *amended*. Return signals
- (2) Where multi-deck staging is being used for shaft-sinking in a mine, an audible or visible return signal system shall be installed and used. *New*. Idem, multi-deck staging
385. No device for signalling to or communicating with the hoistman shall be installed or operated in or on any shaft conveyance in a mine without the written permission of the chief engineer. 1961-62, c. 81, s. 324, *amended*. Special devices
386. No cage call system communicating with the hoist-room shall be installed or used at a shaft or winze in a mine. 1961-62, c. 81, s. 325, *amended*. Cage call system
- 387.—(1) The following code of signals shall be used at every mine and a copy of such code shall be printed and kept posted in every hoist room and at every level or other recognized landing place in every working shaft or winze: Code of signals
- 1 bell Stop immediately — if in motion
(Executive Signal).
- 1 bell Hoist (Executive Signal).
- 2 bells Lower (Executive Signal).
- 3 bells Men travelling in hoisting conveyance (Cautionary Signal). This signal shall be given by the conveyance tender at all levels before any person, including the conveyance tender, is permitted to enter or leave the conveyance. Where a stop exceeds one minute, the 3-bell signal shall precede the next destination signal. Where a return-bell signal system is installed, the hoistman shall return the 3-bell signal before any person is permitted to enter or leave the conveyance.
- 4 bells Blasting Signal. The hoistman shall answer by raising the bucket, cage or skip a few feet and letting it back slowly. Following a 4-bell signal, only

a 1-bell signal shall be required to signal for hoisting persons away from a blast and the hoistman shall remain at the controls until the act of hoisting has been completed.

5 bells. . . . Release Signal. The hoistman may act at his own discretion to perform any movements, or series of movements, involving the conveyance or conveyances designated by the destination signals referred to in section 388. Where a return-signal system is installed, the hoistman shall return the signals and may then act at his own discretion. On the completion of the necessary movements, he shall not move the hoist again until he has received a new signal.

9 bells. . . . Danger Signal (Special Cautionary). To be given only in case of fire or other danger. The signal for the level at which the danger exists should be given following the giving of the danger signal. This signal to be given only on the call system or voice communication system except in shaft sinking and maintenance. 1961-62, c. 81, s. 326 (1), *amended*.

Method
and order
of signals

(2) The following method and order shall be observed in giving signals:

1. Strokes on the bell shall be made at regular intervals.
2. Signals shall be given in the following order:
1st, Cautionary Signals; 2nd, Destination Signals; 3rd, Executive Signals. 1961-62, c. 81, s. 326 (2).

Special
signals

388.—(1) At every mine, other signals, termed destination signals, in conjunction with the code set forth in subsection 1 of section 387 shall be used to designate all regular stopping points. 1961-62, c. 81, s. 327 (1), *amended*.

Idem

(2) Special signals shall be used to designate all special hoisting movements. 1961-62, c. 81, s. 327 (2).

- (3) Special signals shall be easily distinguishable from ^{Idem} the code set forth in subsection 1 of section 387 and shall not interfere with it in any way and shall follow the Department's standard mine signal code, and any deviation from the latter shall be approved by the chief engineer.
- (4) Such destination signals and other special signals ^{Idem} approved for use at any mine and an adequate description of their application to the movements required shall be posted at every hoist, at the top of the shaft or winze and at every working level of the shaft or winze. 1961-62, c. 81, s. 327, *amended*.
- 389.—(1) Except as provided in subsection 2, the hoist- ^{Hoistman not to move conveyances} man shall not move the hoisting conveyance within a period of ten seconds after receiving a signal designating a movement at any time that persons are carried. 1961-62, c. 81, s. 328 (1), *amended*.
- (2) The waiting period mentioned in subsection 1 is not ^{Where waiting period not required} required where throughout the shaft or winze the executive signal given only after the hoisting conveyance doors and the shaft gates have been completely closed and the person giving the signal is inside the conveyance or in the shaft station or other recognized landing place.
- (3) In case the hoistman is unable to act within one ^{If unable to act within one minute} minute of the time he has received any complete signal, he shall not move the hoisting conveyance until he has again received another complete signal. 1961-62, c. 81, s. 328 (2), *amended*.
- 390.—(1) After a hoistman has received a 3-bell ^{3-bell signal} signal, he shall remain at the hoist controls until he has received the signal designating the movement required and has completed that movement. 1961-62, c. 81, s. 329 (1).
- (2) After the hoistman has commenced the movement, ^{Idem} he shall complete it without interruption, unless he receives a stop signal or in case of emergency. 1961-62, c. 81, s. 329 (2), *amended*.
391. Except in case of emergency, no person shall speak ^{Talking to hoistman} to the hoistman while the hoist is in motion, and a sign to this effect plainly visible to any person approaching the hoist controls shall be kept posted at all times. 1961-62, c. 81, s. 331, *amended*.

Signal required	392.—(1) Except as provided in subsection 2, the hoistman shall not move the hoisting conveyance until he has received a proper signal. 1961-62, c. 81, s. 332, <i>part, amended</i> .
Exception	(2) In the event of an inadvertent stop at some point in the shaft or winze other than at a station from which a signal may be given, the hoistman may move the conveyance when he has assured himself that the hoist controls are in proper working order and, when lowering or raising persons he has received instructions from an authorized person. 1961-62, c. 81, s. 332, <i>part, amended</i> .
Only authorized persons to give signal	393.—(1) No person, unless he is authorized so to do, shall give any signal for moving or stopping a bucket, cage or skip in a mine.
Idem	(2) No unauthorized person shall give any signal or in any way interfere with the hoist signalling arrangements.
Voice communication	394.—(1) A system shall be installed in any active shaft or winze to provide voice communication between the collar and regular landing places. 1961-62, c. 81, s. 334 (1) <i>amended</i> .
Idem	(2) Such installations shall be provided at suitable intervals. <i>New</i> .
Position of conveyance	395. No signal shall be given unless the bucket, cage or skip is at the level from which the signal is to be given. 1961-62, c. 81, s. 335.
Hoistman to remain at controls	396.—(1) Except when the hoist is operating under automatic control, the hoistman shall remain at the hoist controls at all times the hoist is in motion. 1961-62, c. 81, s. 330, <i>amended</i> .
Idem	(2) Before a hoistman leaves the hoist controls, he shall ensure that the brakes are fully set and that there will be no inadvertent motion of the hoist drums. <i>New</i> .
Only authorized persons may operate hoist	(3) No person, unless he is authorized so to do, shall operate any equipment for controlling the movement of the hoist or interfere with the equipment. 1961-62, c. 81, s. 333, <i>amended</i> .

HOISTING PROCEDURE

- 397.—(1) If at the commencement of a shift there has been a stoppage of hoisting in a shaft for a period exceeding two hours duration, no regular hoisting shall be done until the shaft conveyance has made one complete trip through the working part of the shaft or, where shaft repairs have been made, a return trip of the shaft conveyance has been made through and below the affected part of the shaft. ^{Hoisting after stoppages}
- (2) The hoistman shall record all such stoppages and trips in the Hoistman's Log Book. 1961-62, c. 81, s. 344, *amended*. ^{Record of stoppages}
398. Where a hoist is equipped with an auxiliary overwind device for preventing persons from being hoisted to the dumping position in skips or in skips of skip-cage assemblies as required in section 533, the hoistman shall place the device in operation or assure himself that it is in operation at all times that persons are in or on the conveyance. 1961-62, c. 81, s. 345, *amended*. ^{Man safety device}
399. Where obstructions such as those referred to in section 527 may exist, the hoistman shall not lower or raise the shaft conveyance without proper authority. 1961-62, c. 81, s. 346, *amended*. ^{Obstructions}
400. All overwind and underwind devices shall be tested at least once during every twenty-four hours of operation and a record of the test shall be posted immediately in the Hoistman's Log Book. 1961-62, c. 81, s. 347, *amended*. ^{Testing overwind devices}
- 401.—(1) The operator of a hoist shall, after going on shift and before a shaft conveyance is lowered or raised, assure himself that the brake or brakes are in proper condition to hold the loads suspended on the corresponding drum or drums by testing the brakes of the drums against the normal starting power of the engine or, in the case of an electric hoist, against the normal starting current. ^{Brakes to be tested}
- (2) The operator of a hoist shall not unclutch a drum of the hoist until the test mentioned in subsection 1 has been made. 1961-62, c. 81, s. 348, *amended*. ^{Drum not to be unclutched}
- 402.—(1) Where a hoist is fitted with a friction clutch, the operator shall, after going on shift and before a conveyance is lowered or raised, test the holding power ^{Friction clutches}

of the clutch, the brake of the corresponding drum being kept on and the brake of the other drum being kept off.

Idem

- (2) In the case of a steam or air hoist, the test mentioned in subsection 1 shall be made against the normal starting power of the engine and, in the case of an electric hoist, against the normal starting current. 1961-62, c. 81, s. 349, *amended*.

Use of
brake when
drum
unclutched

- 403.—(1) When the drum of a hoist is unclutched, the brake of the drum shall be used only for the purpose of maintaining the drum in a stationary position, and no lowering shall be done from an unclutched drum. 1961-62, c. 81, s. 350.

Unclutching
procedure

- (2) Before commencing unclutching operations, the hoistman shall ensure that the brakes have been applied on both hoist drums. *New*.

When
clutch to be
kept in

- (3) When persons are in or on a shaft conveyance, the corresponding drum of the hoist shall be kept clutched in. 1961-62, c. 81, s. 351, *amended*.

HOISTMAN'S LOG BOOK

Hoistman's
Log Book

- 404.—(1) At every shaft or winze hoist, there shall be kept a Hoistman's Log Book in which the following shall be recorded:

1. A report of the working condition of the hoist, including the brakes, clutches, interlocking devices between the brake and clutch, depth indicators and all other devices and fittings pertaining to the safe operation of the hoist.
2. A report of the working condition of the signaling apparatus and a notation of any signals received by the hoistman, the accuracy of which he has questioned.
3. Any special instructions received involving the safety of persons, such entry to be signed by the hoistman and by the person issuing the instructions.
4. A report of the tests of the overwind and underwind devices.

5. Where the required tests of the overwind and underwind devices are conducted by a hoistman operating on another shift, the hoistman assuming duty shall note over his signature that he has examined the entry in the log book of the hoistman who performed the tests.
 6. A report of all abnormal circumstances in connection with the operation of the hoist or attachments thereto and such abnormal conditions as have come to the hoistman's knowledge in connection with the hoisting operations in the shaft or winze.
 7. A report of all trial trips referred to in sections 359 and 397.
- (2) A notification to the hoistman on a succeeding period^{Idem} of duty of any special circumstances or matter affecting the continued operation of the hoist or the safety of persons in the shaft or winze shall be made in the Hoistman's Log Book. 1961-62, c. 81, s. 352 (1, 2).
 - (3) All such entries shall be read and countersigned by the hoistman assuming duty for the succeeding period. 1961-62, c. 81, s. 352 (3), *amended*.
 - (4) Such entries as are required by this section shall be made and signed by every hoistman for his period of duty on a shaft or winze hoist and the time and duration of his period of duty shall also be noted, and such entries as have been made during the preceding twenty-four hours shall be read and countersigned each day by the master mechanic or other authorized person. 1961-62, c. 81, s. 352 (4).
 - (5) The log book shall be available to the district engineer at all times. *New*.

RAISE CLIMBERS

- 405.—(1) Raise climbers shall be fitted with more than one means of braking, each capable of stopping the climber and holding it in place.^{Brakes}
- (2) The operator of a raise climber shall ensure at the beginning of his shift that the brakes are in safe working condition.^{Testing of brakes}
 - (3) Raise climbers shall be maintained in safe operating condition.^{Maintenance}
 - (4) The rated load capacity of a raise climber as certified by the manufacturer shall not be exceeded.^{Load capacity}

- | | |
|--------------------------|---|
| Log book | (5) Where raise climbers are used pursuant to section 263 or subsection 2 of section 375, an approved log book shall be maintained. |
| Record kept | (6) A record of inspections, maintenance and repairs shall be maintained in the log book. |
| Availability to engineer | (7) The log book shall be available to the district engineer at all times. 1961-62, c. 81, s. 387, <i>amended</i> . |

PITS AND QUARRIES

- | | |
|---|---|
| Under-mining prohibited | 406.—(1) In workings of clay, sand, gravel or other types of unconsolidated material, the method of removing material by undermining shall not be used. 1961-62, c. 81, s. 411 (1). |
| Height of working face | (2) Where mechanical equipment is not used, no working face in workings of clay, sand, gravel or other types of unconsolidated material shall have a vertical height of more than ten feet unless the material is at a suitable angle to ensure safety. 1961-62, c. 81, s. 411 (2), <i>amended</i> . |
| Terraces | (3) Where the thickness of the material exceeds ten feet in vertical depth, the work shall be done in terraces or at a suitable angle to ensure safety. |
| Use of mechanical equipment | (4) Where mechanical equipment is used in loading clay, sand, gravel or any other type of unconsolidated material, unless the material is at a suitable angle of repose, no working place shall have a vertical height of more than five feet above the top of the boom or the bottom of the bucket raised to its highest operating position. 1961-62, c. 81, s. 411 (3, 4). |
| Use of internal combustion engines | (5) No internal combustion engine shall be installed or operated in any pit or quarry unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate therein to a degree that is likely to endanger the safety of any person. <i>New</i> . |
| Height of face in consolidated material | 407. Unless permission in writing is first obtained from the chief engineer, all open-cut (cast) operations (workings) in consolidated material over sixty-five feet in depth shall be worked in benches not more than sixty-five feet high, and due precautions shall be taken to maintain the walls, benches and broken material in a safe working condition, and no working face shall be advanced by undercutting, except where a tunnelling method is used. 1961-62, c. 81, s. 412, <i>amended</i> . |

408. Every pit or quarry dangerous by reason of its depth shall be securely fenced or otherwise protected against inadvertent access. 1961-62, c. 81, s. 413. Fencing pits and quarries
- 409.—(1) In all open-pit workings, all unconsolidated materials, such as clay, earth, sand, gravel, and loose rock, lying within six feet of the rim of the pit or quarry, shall be removed. Stripping overburden
- (2) Beyond this strip, all overburden shall be sloped to an angle less than its natural angle of repose. 1961-62, c. 81, s. 414. Idem
- 410.—(1) When dumping material from a vehicle to a stockpile, appropriate precautions considering weather and other relevant conditions shall be taken to keep the vehicle at a safe distance from the edge. 1961-62, c. 81, s. 415. Precautions when stock-piling
- (2) Two exits shall be provided from a tunnel under a stockpile. *New.* Exits from tunnels under stockpiles
- 411.—(1) Unless the adjoining owners agree to dispense therewith, in sand, clay or gravel or other natural unconsolidated material, excavation operations shall not be carried on within a distance from the property boundary of half the height of the total pit face, and material that sloughs from within this distance shall not be removed. 1961-62, c. 81, s. 416 (1). Property boundaries, unconsolidated material
- (2) Unless the adjoining owners agree to dispense therewith, no quarrying operation shall be carried on in a rock quarry within a distance of fifteen feet from the property boundary. Idem, rock quarries
- (3) Subject to subsection 2, where there is overburden in a rock quarry, the natural slope of the overburden shall be allowed for from the property boundary in addition to the six feet required by subsection 1 of section 409. 1961-62, c. 81, s. 416 (2, 3), *amended.* Idem
- 412.—(1) No person shall be permitted to work near a pit or quarry wall until the wall has been examined by the supervisor in charge of the crew. Examination of wall
- (2) If the wall is found unsafe, the supervisor shall have all hazards removed before permitting any other work. 1961-62, c. 81, s. 417, *amended.* Idem
413. Derrick guy wires shall be regularly inspected and maintained. 1961-62, c. 81, s. 418. Inspection of derrick guy wires
- 414.—(1) Every person engaged in work on the wall of a pit or quarry at such operations as barring loose Safety belts and safety harnesses

material, scaling or cleaning, shall wear continuously a safety belt or safety harness.

Snubbing,
etc.

- (2) The rope of such belt or harness shall be securely snubbed above the working place or the rope may be held taut by an adequate number of persons. 1961-62, c. 81, s. 419, *amended*.

Hoisting
of persons
prohibited

415. No person shall be lowered or raised or allow himself to be lowered or raised by means of a hoist or derrick at a pit or quarry unless permission is first obtained in writing from the chief engineer. 1961-62, c. 81, s. 420, *amended*.

Signalman
to clear area

416. Where a load is being hoisted or lowered by means of a hoist or derrick at a pit or quarry, a signalman, where required, shall notify all persons in the vicinity to retire to a place of safety until the load has cleared the danger zone. 1961-62, c. 81, s. 421, *amended*.

Derail at
top of
incline

- 417.—(1) An effective block, automatic derail or safety switch shall be provided at the top of each inclined place at a pit or quarry to prevent cars from accidentally running down.

Exception

- (2) Such installation, however, is not required where the skip or car remains attached to the hoisting rope. 1961-62, c. 81, s. 422, *amended*.

Record of
primary
blasts

418. At all rock quarries and open pits, a record of each primary blast, signed by the person in charge of the blast, shall be kept and the following information recorded:

1. Date, time and location of the blast.
2. Burden, spacing, depth and number of holes blasted.
3. Weight of explosives or blasting agents, footage of top stemming and firing delay detonators used in respect of each hole.
4. Weight of explosives or blasting agents used per estimated ton broken. 1961-62, c. 81, s. 423, *amended*.

Hoisting
signals

419. Unless the movement of a hoisting conveyance at a pit or quarry is visible to the hoistman at all times, a suitable signal system shall be installed and maintained, and suitable signals, approved by the district mining engineer, shall be used. 1961-62, c. 81, s. 424, *amended*.

- 420.—(1) At every pit or quarry, there shall be provided ^{Travelling ways} and maintained in good working condition a suitable travelling way leading from the working level of the pit or quarry to the surface. 1961-62, c. 81, s. 425 (1), *amended*.
- (2) Where the travelling way is inclined at more than ^{Where stairways or ladders mandatory} 30 degrees and less than 50 degrees to the horizontal, stairways or ladders shall be provided.
- (3) All stairways shall be equipped with substantial and ^{Hand-rails on stairways} suitably placed hand-rails. 1961-62, c. 81, s. 425 (2, 3).
- (4) Where the travelling way is inclined at more than ^{Where ladders mandatory} 50 degrees to the horizontal, ladders shall be provided. 1961-62, c. 81, s. 425 (4), *amended*.
- (5) Substantial platforms shall be built at intervals not ^{Platforms} exceeding twenty-one feet in the ladderway and at all places where the ladders are off-set.
- (6) Except for approved access ladders to equipment, ^{Maximum inclination of ladders} no ladder shall be installed at an inclination of more than 70 degrees to the horizontal. 1961-62, c. 81, s. 425 (5, 6).

STEAM, COMPRESSED AIR

- 421.—(1) Every steam boiler used for generating steam ^{Steam boilers} in or about a mine, whether separate or one of a range,
- (a) shall have attached to it a proper safety-valve, steam-gauge and water-gauge to show respectively the pressure of steam and the height of water in each boiler; and
- (b) shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer. 1961-62, c. 81, s. 452 (1), *amended*.
- (2) The certificate of inspection shall be kept posted in ^{Certificate to be posted} the boiler room at all times. 1961-62, c. 81, s. 452 (2).
422. Every such boiler, safety-valve, steam-gauge and ^{Maintenance} water-gauge shall be maintained in proper working condition. 1961-62, c. 81, s. 453.

Air receivers
and com-
pressors

423.—(1) Every air receiver installed at the surface of a mine and those installed with an air compressor underground shall be inspected by an Ontario Government boiler inspector or by an inspector of a boiler insurance company at least once in every twelve months, and a certified copy of the report of the inspection shall be forwarded to the chief engineer.

Certificate
to be
posted

(2) The certificate of inspection shall be kept posted in the compressor room at all times.

Examina-
tion and
mainten-
ance

(3) All intercoolers, aftercoolers, inlet and discharge valves on stationary compressors in operation shall be examined at least once in every twelve months and shall be cleaned when necessary. 1961-62, c. 81, s. 454 (1-3).

Temper-
ature-
indicating
device

(4) A temperature-indicating device shall be installed on the high pressure discharge of each compressor and the normal operating temperature of the compressor shall be indicated by a red mark on the scale of the device. 1961-62, c. 81, s. 454 (4, 5), *amended*.

Recording
of tem-
perature

(5) The temperature shall be observed at regular intervals during the shift and shall be recorded in the compressor log book.

Exception

(6) Subsections 3, 4 and 5 do not apply to,

(a) a compressor discharging to atmosphere;

(b) a compressor installation with a prime-mover having a Therm-hour rating of 1.145 or less;

(c) a compressor plant used for compressing air to a pressure of more than 15 pounds per square inch where the total Therm-hour rating of the prime-mover or movers is 1.908 or less; or

(d) a compressor where the cylinders are not lubricated with oil. 1961-62, c. 81, s. 454 (6, 7), *amended*.

Examina-
tion of air
receivers

(7) The air receivers mentioned in subsection 1 shall be examined at least once in every twelve months and shall be cleaned when necessary.

Record of
examina-
tions

(8) A book, available to the district engineer, shall be kept in which shall be recorded the date of every examination and cleaning under subsections 3 and 7 and a note shall be made as to the condition of the appliance examined or cleaned. 1961-62, c. 81, s. 454 (8, 9), *amended*.

PROVISIONS GOVERNING THE USE OF ELECTRICITY

424.—(1) In this section and in sections 425 to 563, governing the use of electricity,

1. "accessible", as applied to equipment, means ^{Interpre-} permitting close approach due to not being ^{tation} guarded by locked doors, elevation or other effective means;
2. "armoured cable" means a cable provided with an outer covering, fabricated from a metal other than lead, which forms an integral part of the assembly of the cable and is designed primarily to afford mechanical protection;
3. "authorized person" means,
 - i. a qualified person who, because of his duties or occupation, is delegated to approach or handle electrical equipment, or
 - ii. any other person who, having been warned of the hazards involved, has been instructed or authorized to approach or handle electrical equipment by some person having authority to give the instructions or authorization;
4. "branch circuit" means the part of a circuit that extends beyond the final over-current devices on the circuit;
5. "circuit" means a path through which electric current can flow;
6. "circuit-breaker" means an electro-mechanical device designed to open, under both overload and short-circuit conditions, a current-carrying circuit without injury to the device;
7. "conductor" means a body so constructed from conducting material that it may be used as a carrier of electric current;

8. "contactor" means a device, operated other than by hand, for repeatedly establishing and interrupting an electric power circuit;
9. "disconnecting means" means a device, group of devices or other means whereby the conductors of a circuit can be disconnected from their source of supply;
10. "electrical equipment" means any apparatus, appliance, device, instrument, fitting, fixture, machinery, material or thing used in or for, or capable of being used in or for, the generation, transformation, transmission, distribution, supply or utilization of electric power or energy, and, without restricting the generality of the foregoing, includes any assemblage or combination of materials or things which is used, or is capable of being used or adapted, to serve or perform any particular purpose or function when connected to an electrical installation, notwithstanding that any such materials or things may be mechanical, metallic or non-electric in origin;
11. "feeder" means a conductor, or group of conductors, which transmits electrical energy from a service supply, transformer, switchboard, distribution centre, generator or other source of supply to branch circuit overcurrent devices;
12. "ground" means a connection to earth obtained by a ground electrode;
13. "ground electrode" means a buried metallic water-piping system or metal object or device buried in or driven into the ground so as to make intimate contact therewith and to which a grounding conductor is electrically and mechanically connected;
14. "grounded" means connected effectively with the general mass of the earth through a grounding system having a current-carrying capacity sufficient at all times, under the most severe conditions that are liable to arise in practice, to prevent a current in the grounding conductor from causing a harmful voltage to exist,

- i. between the grounded conductors and neighbouring exposed conducting surfaces that are in good contact with the earth, or
 - ii. between the grounded conductors and neighbouring surfaces of the earth itself;
- 15. "grounding conductor" means a path of suitable metal specially arranged as a means whereby electrical equipment is electrically connected to a ground electrode;
- 16. "grounding system" means all conductors, clamps, ground clips, ground plates or pipes and ground electrodes by means of which the electrical installation is grounded;
- 17. "guarded" means covered, shielded, fenced, enclosed or otherwise protected by means of suitable covers, or casings, barriers, rails or screens, mats or platforms, to remove the likelihood of dangerous contact or approach by persons or objects;
- 18. "isolating means" means a device, group of devices or other means intended for isolating an electric circuit from its source of power and intended to be operated only after the circuit has been opened by some other means;
- 19. "mobile", as applied to electrical equipment, means the equipment is specifically designed not to be used in a fixed position;
- 20. "overcurrent device" means any device capable of automatically opening an electrical circuit both under pre-determined overload and short-circuit conditions either by fusing of metal or by electro-mechanical means;
- 21. "overload device" means a device affording protection from excess current but not necessarily short-circuit protection, and capable of automatically opening an electric circuit either by the fusing of metal or by electro-mechanical means;
- 22. "qualified person" means a person familiar with the construction and operation of electrical equipment and the hazards involved;

23. "switch" means a device for making, breaking or changing connections in a circuit, and
 - i. "general use switch" means a switch that is intended for use in general distribution and branch circuits, is rated in amperes and is capable of interrupting its rated current at rated voltage, and
 - ii. "motor circuit switch" means a switch, rated in horsepower, capable of interrupting the maximum operating overload current of a motor of the same horsepower at the rated voltage;
24. "switchboard" means a panel or assembly of panels on which are mounted any combination of switching, measuring, control and protective devices, buses and connections, designed with a view to successfully carrying and rupturing the maximum fault current encountered when controlling incoming and outgoing feeders;
25. "utilization equipment" means equipment, devices and connected wiring that utilize electrical energy for mechanical, chemical, lighting, testing or similar purposes and are not a part of the supply equipment, supply lines or communication lines;
26. "visible break", where applied to a disconnecting means, means a switch or device wherein the separation between all members of the movable and the fixed current-carrying parts may be readily determined by visual inspection;
27. "voltage" or "volts" means the highest effective difference of potential between the conductors of the circuit concerned;
28. "voltage to ground" means,
 - i. in grounded circuits, the highest effective difference of potential between any wire of the circuit and ground,
 - ii. in ungrounded circuits, the highest effective difference of potential existing in the circuit;

29. "wire gauge" means the standard known as A.W.G. (American Wire Gauge) or B. & S. (Brown and Sharpe) wire gauge. 1961-62, c. 81, s. 455.

- (2) Except where a contrary intent is provided, sections 425 to 563 apply to mines, on surface and under-ground, and to plants. *New.* Application of ss. 425-563

GENERAL

425. In case of the abandonment of a mine or plant, the owner, agent or manager shall cause the station or stations supplying power to and being the property of the mine or plant to be disconnected from the power source and within fourteen days shall notify the chief engineer in writing that the disconnection has been made. 1961-62, c. 81, s. 456, *amended.* Disconnection when abandoned
- 426.—(1) Electrical equipment shall be designed, installed and maintained in compliance with the requirements of this Part. 1961-62, c. 81, s. 457. Requirements to be observed
- (2) The district electrical-mechanical engineer shall be notified of any proposed, Notification required
- (a) major electrical installation;
 - (b) radio-frequency transmitter installation; or
 - (c) major extension to existing installations. *New.*
427. The edition that is current from time to time of the Canadian Electrical Code, Part I, shall be accepted as good practice in the installation of electrical equipment except where it conflicts with the provisions of this Part in which case the provisions of this Part prevail. 1961-62, c. 81, s. 458, *amended.* Accepted standard
428. All electrical equipment shall be of such construction and so installed and maintained as to reduce fire hazard and injury to persons as far as is practicable. 1961-62, c. 81, s. 459, *amended.* Hazard free
429. All electrical equipment shall be suitably identified where necessary for safety. 1961-62, c. 81, s. 460. Identification of equipment
430. Electrical equipment shall show a plate bearing the maker's name and all other ratings, such as horsepower, voltage or current, necessary to prove its suitability. 1961-62, c. 81, s. 461. Nameplate required

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|--|--|
| Competent person in charge | 431.—(1) Where electrical equipment is used at a mine or plant, it shall be in the charge of an authorized person who shall be qualified by experience to handle such equipment. 1961-62, c. 81, s. 462 (1), <i>amended</i> . |
| Idem | (2) Every person operating or having charge of electrical equipment shall have been instructed in his duty and shall be competent to perform the work that he is set to do. |
| Idem | (3) Repairs, extensions and changes to existing electrical installations shall be made only by qualified persons. 1961-62, c. 81, s. 462 (2, 3). |
| Temporary installations | 432. Temporary wiring and equipment that do not comply with this Part may be used in an emergency, but only when under competent supervision or protected by suitable barriers or warning signs while it or neighbouring wiring is alive and accessible to unauthorized persons, and such temporary installations are permissible only for the period of the emergency. 1961-62, c. 81, s. 463, <i>amended</i> . |
| Defective equipment | 433.—(1) Defective equipment shall be put in good order or permanently disconnected. |
| Defective wiring | (2) Defective wiring shall be repaired or removed. 1961-62, c. 81, s. 464. |
| Repairs or alterations to electrical equipment | 434.—(1) No repairs or alterations shall be carried out on live equipment except where complete disconnection of the equipment is not practicable. |
| Idem | (2) When repairs or alterations are being made, whether the equipment is alive or dead, all necessary precautions shall be taken to ensure that the work may be done safely. |
| Idem | (3) In places where explosive or highly flammable materials or gases are present, or in wet locations, repairs or alterations shall not be made on live equipment. 1961-62, c. 81, s. 465, <i>amended</i> . |
| Locking or tagging switches | 435.—(1) All switches controlling electrical equipment shall be locked or plainly tagged in the open position to prevent the inadvertent closing thereof while work is being done on the apparatus. |
| Idem | (2) Notices placed on electrical equipment shall be of non-conducting materials. 1961-62, c. 81, s. 466. |

- 436.—(1) Where installed electrical equipment presents a fire hazard, each room or space shall be provided with an adequate approved fire-extinguishing appliance, conveniently located and conspicuously marked. ^{Fire-extinguishing appliances}
- (2) Any fire-extinguishing appliance that has not been approved for use on live parts shall not be placed in a room containing electrical equipment or exposed lines unless a sign is mounted at the appliance warning against its use on electrical fires. 1961-62, c. 81, s. 467. ^{Idem}

GROUNDING

437. Grounding conductors shall have adequate protection where exposed to mechanical injury. 1961-62, c. 81, s. 468. ^{Protection from mechanical injury}
- 438.—(1) One conductor of all circuits not over 150 volts shall be grounded if exposed to leakage from higher voltage circuits either through overhead construction or through transformers having a primary voltage exceeding 750 volts, except where such circuits form part of a control circuit or signalling system the grounding of which would affect the reliability of service. ^{Circuits to be grounded}
- (2) Three-wire single-phase circuits not exceeding 300 volts between outer conductors shall have the neutral grounded. ^{Idem}
- (3) One conductor of the secondary circuits of all instrument transformers shall be grounded unless the circuits are installed and guarded as required for the high-voltage circuits of the transformers. 1961-62, c. 81, s. 469. ^{Idem}
- 439.—(1) For grounding a.c. circuits, the grounding conductors shall have adequate current-carrying capacity and shall be not less than No. 8, A.W.G. ^{Size of circuit grounding conductor}
- (2) The grounding conductor for secondary circuits of instrument transformers shall not be smaller than the conductors of the secondary circuit. 1961-62, c. 81, s. 470. ^{Idem}
- 440.—(1) The exposed non-current-carrying metal parts of all electrical equipment shall be grounded when practicable, ^{Equipment to be grounded}

(a) for all equipment over 150 volts; and

- (b) for all equipment under 150 volts where the exposed non-current-carrying metal parts are within reach of exposed grounded surfaces, such as metal frames of other machines, plumbing fixtures, conducting floors or walls.

Idem

- (2) Grounded surfaces within five feet horizontally of the parts considered or within eight feet vertically of the floor shall be considered within reach. 1961-62, c. 81, s. 471.

Size of
equipment
grounding
conductor

- 441.—(1) The minimum size of grounding conductor for raceways and fixed equipment shall be not less than that provided by a copper conductor of a size indicated in the following table:

MINIMUM SIZE OF GROUNDING CONDUCTOR
FOR RACEWAYS AND EQUIPMENT

Rating or Setting of Automatic Overcurrent Device in Circuit Ahead of Equipment, Conduit, etc., Not exceeding— Amperes	Size of Grounding Conductor			
	Copper Wire AWG	Alum. Wire AWG	Conduit or Pipe Inch	Electrical Metallic Tubing Inch
20	16*	14*	$\frac{1}{2}$	$\frac{1}{2}$
30	14	12	$\frac{1}{2}$	$\frac{1}{2}$
40	12	10	$\frac{1}{2}$	$\frac{1}{2}$
60	10	8	$\frac{1}{2}$	$\frac{1}{2}$
100	8	6	$\frac{1}{2}$	$\frac{1}{2}$
200	6	4	$\frac{1}{2}$	1
400	4	2	$\frac{3}{4}$	$1\frac{1}{4}$
600	2	0	$\frac{3}{4}$	$1\frac{1}{4}$
800	0	00	1	2
1000	00	000	1	2
1200	000	0000	1	2

*Permissible only when part of an approved cable assembly.

Idem

- (2) Where the grounding conductor is run outside the cable armour or conduit enclosing the associated circuit conductors, the minimum size of such a grounding conductor shall be No. 8, A.W.G. 1961-62, c. 81, s. 472.

Grounding
conductor
size for
portable
equipment

442. Flexible cord used to supply portable equipment having a rating of fifteen amperes or less at voltages not exceeding 250 volts shall have included in the cord assembly a grounding conductor whose size shall be,

- (a) not smaller than No. 16, A.W.G. if uninsulated, or No. 18, A.W.G. if insulated; and

- (b) at least the same size as the current-carrying conductors, except that, in cords of No. 12, A.W.G. and larger, it may be two A.W.G. sizes smaller than the other conductors. 1961-62, c. 81, s. 473.

443. The grounding conductor, bond or bonding jumper shall be attached to circuits, conduits, cabinets, equipment and the like, which are to be grounded, by means of suitable lugs, pressure connectors, clamps or other approved means. 1961-62, c. 81, s. 474. Means of attachment to circuits and equipment
444. The grounding conductor shall be of copper or other metal that will not corrode excessively under the existing conditions. 1961-62, c. 81, s. 475. Material for grounding conductors
- 445.—(1) Ground connections to metallic water or air systems shall be made beyond any point liable to disconnection. Piping system used as ground
- (2) Main water or air lines shall be substantially bonded together for this purpose, but shall, unless connected to a buried piping system of considerable extent that will provide a low-resistance ground, be connected to an artificial ground electrode. 1961-62, c. 81, s. 476. Idem
446. The grounding conductor shall be connected to the grounding electrode by means of a substantial ground clamp or other equivalent means. 1961-62, c. 81, s. 477. Means of attachment to ground electrode
- 447.—(1) Artificial ground electrodes shall consist of driven pipes, rods, buried plates or other devices acceptable for the purpose. Artificial electrodes
- (2) Electrodes of iron or steel pipe shall be not less than $\frac{3}{4}$ -inch internal diameter and shall be galvanized. Idem
- (3) Rod electrodes shall be not less than $\frac{5}{8}$ -inch in diameter if of iron or steel or $\frac{1}{2}$ -inch in diameter if of non-ferrous metal. 1961-62, c. 81, s. 478. Idem
448. The grounding system shall be connected to the body of the earth, on the surface, through an earth-contact resistance acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 479, *amended*. Resistance of electrodes

Resistance
measure-
ment

449. The earth-contact of the main grounding system and supplementary earth-contacts shall be provided with means to facilitate measurement of earth-contact resistances. 1961-62, c. 81, s. 480.

WIRING METHODS

Types of
conductors

450. Conductors shall be suitable for the location, use and voltage of the circuit and shall have sufficient current-carrying capacity for the current they are required to carry. 1961-62, c. 81, s. 481.

Portable
power
conductors

451. Portable conductors supplying mobile equipment operating at more than 300 volts shall conform with the following specifications:

1. The cable shall have a voltage rating not less than 50 per cent higher than the normal operating voltage of the circuit.
2. Cable of standard rating for the normal operating voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,
 - i. limit ground fault current, and
 - ii. limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,

and where ground fault protection is provided.

3. All conductors including grounding conductors shall be contained in one flexible, jacketed cable assembly.
4. Where the cable contains both the power circuit and its remote control circuit, each circuit conductor shall be insulated, as required by paragraphs 1 and 2, for the highest potential employed in the cable, except that, where sheathing, as in paragraph 10, is provided, the control conductors need only be insulated for their normal operating voltage.
5. The minimum size of the power conductors shall be No. 12, A.W.G.

6. The cable shall contain as many grounding conductors as power conductors and the grounding conductors shall be located in the outer interstices between the power conductors.
 7. Remote control conductors contained in the cable need not be considered power conductors in determining the number of grounding conductors.
 8. The grounding conductors contained in the cable shall be uninsulated and shall have a total conductance of not less than 60 per cent of the largest power conductor.
 9. The minimum size of each grounding conductor shall be not less than No. 12, A.W.G.
 10. Cables on circuits operating over 750 volts shall have a grounded sheathing, consisting of tinned copper wire mesh, or the equivalent, around each power conductor, and this sheathing shall be, throughout the length of the cable, in contact with the interstitial grounding conductors.
 11. Where connectors are used to attach cables to mobile equipment, the cable shall be secured in such a manner as to prevent mechanical damage.
 12. Portable cable used to supply equipment in underground workings shall have an outer jacket of a material that will not support combustion and shall be continuously identified as having such a jacket. 1961-62, c. 81, s. 482, *amended*.
- 452.—(1) All exposed current-carrying parts of electrical equipment, such as bus-bars, conductors and terminals, operating at over 150 volts, shall be, ^{Guarding of live parts}
- (a) armoured;
 - (b) enclosed in a suitable raceway; or
 - (c) isolated by elevation or guarded. 1961-62, c. 81, s. 483.
- (2) Except in cases of emergency, open wiring shall not ^{Open wiring} be used. 1961-62, c. 81, s. 578.

A.C. circuits
in raceways

453. All conductors of an a.c. circuit shall be contained in the same raceway. 1961-62, c. 81, s. 484.

Conductors
of different
systems in
raceways or
armouring

454. Where conductors of different systems are installed in the same raceway or armouring, each conductor shall be insulated for the highest potential employed or, in the case of a raceway, separated by a suitable barrier. 1961-62, c. 81, s. 485.

Conductors
of different
systems in
enclosures

455. Conductors of different systems shall not be installed in the same box, cabinet or auxiliary gutter unless effectively separated by barriers. 1961-62, c. 81, s. 486.

Barriers

456. Identifying barriers shall be provided between circuits where more than one set of single-pole, blade-type isolating switches are installed adjacent to each other. 1961-62, c. 81, s. 487, *amended*.

Connections
to
apparatus

457. Metal-covered and insulated conductors in conduit, where joined to transformers, motors, switchgear and other electrical equipment, shall have their metal coverings secured to such equipment by clamps, lock-nuts or other devices to protect the insulated conductors from mechanical injury. 1961-62, c. 81, s. 488.

PROTECTION AND CONTROL

Type and
rating of
protective
and control
devices
Idem

458.—(1) The type and rating of protective and control devices shall be suitable for their use.

(2) All protective and control devices installed outdoors shall be of a design suitable for their location. 1961-62, c. 81, s. 489.

Overcurrent
devices
required

459.—(1) Each ungrounded conductor shall be protected by an overcurrent device at the point where it receives its supply of current and at each point where the size of the conductor is decreased, except that such protection may be omitted,

(a) where the branch circuit is not more than twenty-five feet in length;

(b) where the protection for a larger conductor adequately protects a smaller; and

(c) where the opening of the circuit may cause special hazard by the interruption of service or removal of protection.

- (2) The rating or setting of the protective device shall ^{Idem} not exceed the allowable current-carrying capacity of the circuit conductors except in the case of branch motor circuits where the rating or setting of the device may be increased sufficiently to take care of motor-starting currents.
- (3) Unless the opening of the device disconnects all ^{Idem} circuit conductors at the same time, no manually-operated or automatically-operated disconnecting device shall be placed in a neutral or grounded conductor. 1961-62, c. 81, s. 490.
460. Overcurrent devices shall be enclosed in cut-out ^{Enclosure of overcurrent devices} boxes or cabinets unless they form a part of an approved assembly that affords equivalent protection or unless mounted on switchboards, panel-boards, or controllers located in rooms or enclosures free from easily ignitable material and dampness, and accessible only to authorized persons. 1961-62, c. 81, s. 491.
- 461.—(1) Suitable control devices shall be inserted in all ^{Control devices, general} feeders and branch circuits.
- (2) All control devices shall be readily and safely accessible to authorized persons and shall be so located, labelled or marked as to afford means of identifying circuits or equipment supplied through them and shall indicate whether they are open or closed. ^{Idem} 1961-62, c. 81, s. 492.
- 462.—(1) Control devices shall have ratings suitable for ^{Rating of control devices} the connected load of the circuits they control and, with the exception of isolating switches, shall be capable of interrupting such loads.
- (2) Control devices shall be grouped where practicable. ^{Grouping of control devices}
- (3) All control devices shall be so arranged that the operating mechanisms are readily accessible to the ^{Location of control devices} operator. 1961-62, c. 81, s. 493.
- 463.—(1) Control devices, unless they are located or guarded so as to render them inaccessible to unauthorized persons and to prevent fire hazards, shall have all current-carrying parts in enclosures of metal or other fire-resisting material. ^{Enclosure of control devices}
- (2) Manually-operable control devices shall be so constructed that they may be switched to the "off" ^{Idem} position without exposing live parts.

- Idem (3) Manually-operable control devices shall clearly indicate the "on" and "off" positions. 1961-62, c. 81, s. 494.
- Connection of control devices 464. Control devices shall, if practicable, be so connected that the blades or moving contacts will be dead when the device is in the open position. 1961-62, c. 81, s. 495.
- Control devices ahead of overcurrent devices 465. Control devices used in combination with overcurrent devices or overload devices for the control of electrical equipment shall be connected so that the overcurrent or overload devices will be dead when the control device is in the open position. 1961-62, c. 81, s. 496.
- Visible break requirement 466.—(1) Disconnecting means of the visible-break type shall be installed on all circuits operating at over 300 volts to ground and shall be as near as is practicable to the point of supply.
- Idem (2) Unless a control device on circuits over 300 volts makes a visible break, there shall be installed between the control device and its point of supply a suitable disconnecting switch. 1961-62, c. 81, s. 497.
- Ground fault detector requirement 467.—(1) On each ungrounded utilization system over 300 volts, at least one suitable device shall be installed and maintained for the purpose of indicating ground faults.
- Idem (2) Such device shall be provided with,
 (a) short-circuit protection; and
 (b) disconnecting means. 1961-62, c. 81, s. 498 (1, 2).
- Idem (3) When a ground fault is indicated, it shall be located and removed as soon as is practicable. 1961-62, c. 81, s. 498 (4).
- Illumination of equipment 468. Adequate illumination shall be provided to allow for proper operation of electrical equipment. 1961-62, c. 81, s. 499.
- Emergency illumination of equipment 469. Where electrical equipment requires an attendant, there shall be provided a separate emergency source of illumination from an independent generator, storage battery or other suitable source. 1961-62, c. 81, s. 500.

INSTALLATION OF EQUIPMENT

470. Adequate clear working space with secure footing shall be provided about all electrical equipment. ^{Working space}
1961-62, c. 81, s. 501.

TRANSFORMERS

471. Transformers shall be of a type and design suitable for the location in which they are to be installed. ^{General}
1961-62, c. 81, s. 502.
472. Each transformer shall be provided with a name-plate bearing the following markings: ^{Nameplate required for transformers}
1. Maker's name.
 2. Rating in kva.
 3. Rated full load temperature rise.
 4. Primary and secondary voltage ratings.
 5. Frequency in cycles per second.
 6. Liquid capacity, if of the liquid-filled type.
 7. Type of liquid to be used, if it is to be filled with an approved liquid that will not burn in air. 1961-62, c. 81, s. 503.
 8. Percentage impedance voltage, if of the power or distribution type. *New*.
473. Transformers having a voltage rating in excess of 750 volts and all transformers having exposed terminals, including their conductors and control and protective devices, shall be accessible only to authorized persons and, unless isolated by elevation, they shall be surrounded by an enclosure that, if of metal, shall be grounded, and suitable warning signs indicating the highest potential employed shall be conspicuously posted. 1961-62, c. 81, s. 504. ^{Isolation and guarding of transformers}
- 474.—(1) Dry-core type transformers with Class A insulation, if installed within a building not of fire-resistive construction, shall be in a fire-resistive enclosure. ^{Special transformers}
- (2) Transformers containing an approved liquid that will not burn in air and transformers of the dry-core type with Class B or Class C insulation may be installed within or attached to the wall of a building not of fire-resistive construction, if they are surrounded by a suitable enclosure to prevent mechanical injury and access by unauthorized persons. ^{Idem}
1961-62, c. 81, s. 505.

Liquid-filled transformers

475.—(1) Oil-filled transformers installed outdoors shall be located not less than fifty feet distant from the shafthouse or any combustible building attached thereto, and means shall be provided to contain escaping oil or to direct the flow away from such buildings.

Idem

(2) Oil-filled transformers shall not be mounted on or above combustible roofs and, if attached to the exterior of a building other than a transformer-house, shall be placed only against non-combustible walls and away from all openings.

Idem

(3) Transformer buildings containing oil-filled transformers, if not entirely of fire-resistive construction, shall be located at least fifty feet distant from any other combustible building.

Idem

(4) Oil-filled transformers, if within a building other than a transformer-house, shall be in a vault.

Idem

(5) Transformers having their cores immersed in a liquid that will not burn in air may be installed without a vault if,

(a) the transformer is protected from mechanical damage either by location or guarding;

(b) a pressure relief vent is provided where the rating exceeds 25 kva at 25 cycles or $37\frac{1}{2}$ kva at 60 cycles; and

(c) a means of absorbing gases generated by arcing inside the case, or a pressure relief vent connected to outdoors, is provided where the transformer is installed in a poorly-ventilated section. 1961-62, c. 81, s. 506.

Instrument transformers

476.—(1) When primaries are above 750 volts, secondary circuits of current and potential transformers, unless otherwise adequately protected from injury or contact with persons, shall be in permanently-grounded conduit or armour.

Idem

(2) Secondary circuits of current transformers shall be provided with means for short-circuiting them that can be readily connected while the primary is energized and that are so arranged as to permit the removal of any instrument or other device from the circuits without opening the circuits. 1961-62, c. 81, s. 507.

477. Each transformer or each bank of transformers operating as a unit shall have overcurrent protection. ^{Overcurrent protection for transformers} 1961-62, c. 81, s. 508.
- 478.—(1) Control and protective devices, complying with one of the following, shall be installed for all power and distribution transformers: ^{Control and protection requirements}
- (a) Circuit-breakers of adequate interrupting capacity and rating.
 - (b) Fuses of adequate rating and interrupting capacity preceded by suitable group-operated visible-break load-interrupting devices capable of making and interrupting their full load rating and that may be closed with safety to the operator with a fault on the system.
 - (c) Fuses of adequate rating and interrupting capacity preceded by a group-operated visible-break air-break switch capable of interrupting the magnetizing current of the transformer installation and that may be closed with safety to the operator with a fault on the system and so interlocked with the transformer secondary load interrupters as to prevent its operation under load.
- (2) Where the transformer rating does not exceed 100 ^{Idem} kva per phase and the potential between phases does not exceed 7,500 volts, a single-pole disconnecting fuse of adequate interrupting capacity may be used on the primary. 1961-62, c. 81, s. 509.

SWITCHBOARDS AND SWITCHGEAR

479. Panels of switchboards shall be of incombustible ^{General} material and shall be substantially supported on a metal framework. 1961-62, c. 81, s. 510.
480. Adequate illumination shall be provided for reading ^{Illumination of switchboards} instruments and other operations. 1961-62, c. 81, s. 511.
481. Switchgear, if not of the dead-front or enclosed type, ^{Location of switchgear} and live parts on the rear of dead-front switchboards shall be inaccessible to unauthorized persons. 1961-62, c. 81, s. 512.

Clearance
back of
switchboard

482.—(1) There shall be a space of not less than three feet between equipment on the back of a fixed switchboard and the nearest adjacent wall when such equipment is less than seven feet from the floor.

Ingress and
egress

(2) Ready means for ingress and egress to the space behind the switchboard shall be provided.

Doors, etc.

(3) Doors or gates of suitable material may be provided at such points for guarding-purposes but they shall be capable of being readily opened from the inside without the use of a key or tool.

Space to be
kept clear

(4) The space behind the switchboard shall be kept clear of foreign material and shall not be used for storage purposes. 1961-62, c. 81, s. 513.

TRANSMISSION LINES

General

483. All electrical supply lines and equipment shall be of suitable design and construction for the service and the conditions under which they are to be operated, and all lines shall be so installed and maintained as to reduce fire hazard and injury to persons as far as is practicable. 1961-62, c. 81, s. 514.

Isolation
and
guarding

484. Conductors and other current-carrying parts of supply lines shall be so arranged as to provide adequate clearance from the ground or other space generally accessible or shall be provided with guards so as to isolate them effectively from accidental contact of persons. 1961-62, c. 81, s. 515.

Entrance to
buildings

485. Where conductors over 300 volts are attached to any building for entrance, they shall be isolated by elevation or guarded. 1961-62, c. 81, s. 516.

Clearance
over
railways

486.—(1) Supply lines carried over railways operated by steam, electric or other motive power and on which standard equipment, such as freight cars, is used, shall have the style of construction and the clearances overhead as called for in the Uniform Code of Operating Rules prescribed by the Transport Commissioners for Canada.

Idem

(2) Supply lines crossing over railways on which standard equipment is not used and lines crossing over roadways shall have ample clearance for the operating conditions and shall be substantially supported. 1961-62, c. 81, s. 517. *Amended.*

STORAGE BATTERIES

487. Storage batteries shall be kept in inaccessible battery rooms or enclosures used for no other purpose where, ^{Location of storage batteries}
- (a) the aggregate capacity at the eight-hour discharge rate exceeds five kilowatt hours; and
 - (b) the batteries are in open jars or tanks. 1961-62, c. 81, s. 518.
- 488.—(1) Storage battery rooms shall be thoroughly ventilated. ^{Ventilation of battery rooms}
- (2) Adequate means shall be provided for sufficient ^{Idem} diffusion and ventilation of the gases from the battery to prevent the accumulation of an explosive mixture. 1961-62, c. 81, s. 519.

LIGHTNING ARRESTERS

489. Where lightning arresters are installed in a building, they shall be located well away from all equipment, other than that which they protect, and from passageways and combustible parts of buildings. ^{Indoor installation of lightning arresters} 1961-62, c. 81, s. 520.
490. Lightning arresters installed for the protection of utilization equipment, ^{Location of lightning arresters}
- (a) may be installed either inside or outside the building or enclosure containing the equipment to be protected; and
 - (b) shall be isolated by elevation or guarded. 1961-62, c. 81, s. 521.
- 491.—(1) All non-current-carrying parts of lightning arresters shall be grounded, unless effectively isolated by elevation or guarded as required for live parts of the voltage of the circuit to which the arrester is connected. ^{Grounding}
- (2) Grounding conductors for lightning arresters on power transmission systems shall be run as directly as possible and be of low resistance and ample capacity. ^{Idem}
- (3) In no case shall such grounding conductors be less than No. 6 copper wire, nor shall such grounding conductors pass through metal conduits unless electrically connected to both ends of the conduits. ^{Idem} 1961-62, c. 81, s. 522.

MOTORS

Control
required

492. All motors shall be provided with approved starting and control equipment. 1961-62, c. 81, s. 523, *amended*.

Interlocking
motor
circuits

493. Where it is desired to interlock one motor control circuit with a second motor controller,

(a) the supply or control conductors of one motor branch circuit shall not be run through or connected into the enclosure of a second motor controller unless such conductor or conductors are opened and de-energized by the disconnecting means of the second motor branch circuit; or

(b) a suitable relay may be interposed between the two controllers and located externally to both controllers. *New*.

Visible-
break
requirement

494. In all cases, the motor-circuit switch, general-use switch or isolating switch shall be of the visible-break type. 1961-62, c. 81, s. 525.

Discon-
necting
means
required

495. Every motor and its starting and control equipment shall be provided with a disconnecting means which will open all ungrounded conductors to the motor and which conforms to one of the following:

1. An approved attachment plug and receptacle may serve as disconnecting means for a portable motor.
2. An isolating switch or a general use switch may be used as a disconnecting means for motors of more than 50 horsepower.
3. In all other cases the disconnecting means shall consist of a motor circuit switch, a circuit breaker, or equivalent approved device capable of safely establishing and interrupting the stalled rotor current of the motor. *New*.

Rating of
discon-
necting
means

496. The disconnecting means shall have a rating not less than the following:

1. A motor circuit switch for a single motor shall have a horsepower rating, not less than that of the motor it serves.

2. A circuit breaker or isolating switch for a single motor shall have a current rating not less than 115 per cent of the full load current rating of the motor it serves.
3. A fused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required to accommodate the proper size of fuse.
4. An unfused motor circuit switch serving a group of motors under the protection of a single set of fuses need not have a rating greater than that required if a fused switch were used.
5. A disconnecting means serving a group of motors on a single circuit shall have,
 - i. a horsepower rating not less than that of the largest motor in the group, if a motor circuit switch is used, and
 - ii. a current rating not less than 115 per cent of the full load current rating of the largest motor in the group plus the sum of the full load current ratings of all the other motors in the group which may be in operation at the same time.

New.

497. Motors shall be disconnected from the source of supply in case of low voltage by one of the following means unless it is evident that no hazard will be incurred through the lack of such disconnection:

Under-voltage protection required

1. Where automatic restarting is liable to create a hazard, the motor control device shall provide low-voltage protection.
2. Where it is necessary or desirable that a motor stop on failure or reduction of voltage and automatically restart on return of voltage, the motor control device shall provide low-voltage release. 1961-62, c. 81, s. 528, *amended*.

498. Each motor shall be suitably protected against continuous overload.

Overload protection required

CRANES, SHOVELS AND OTHER SIMILAR MACHINERY

Guarding
and
isolation

499.—(1) Crane collector wires shall be isolated by elevation and, where necessary, guarded.

Discon-
necting
means

(2) Suitable means that will disconnect all ungrounded conductors of the circuit supplying a crane, as defined in subsection 1 of section 249, shall be,

(a) provided within sight of the main contact conductors or within sight of the equipment if there are no main contact conductors; and

(b) accessible and operable from the ground or the floor over which the equipment operates;

(c) a circuit breaker or switch, capable of interrupting the circuit under heavy loads, shall be installed in the cab unless the current collector can be safely removed, under heavy loads, from the crane collector wires. 1961-62, c. 81, s. 530, *amended*.

Switch
required
in cab

(3) A circuit-breaker or switch, capable of interrupting the circuit under heavy loads, shall be installed in the cab unless the current collector can be safely removed, under heavy loads, from the crane collector wires. 1961-62, c. 81, s. 531.

Protection
from
overhead
lines

500. Where it is necessary to operate shovels or other similar machinery having a mast or movable boom near exposed electrical conductors, a clearance equal to not less than one-half the maximum horizontal reach of the machine shall be maintained unless,

(a) the conductors are disconnected from the electrical supply and permission to work on the conductors has been authorized; or

(b) the conductors are first given adequate mechanical protection by the electrical authority involved, to prevent contact by the machine, its attachments or load; or

(c) the work involves the conductors and is being carried out by a qualified person using a machine with an insulated boom designed, built and tested for use on electrical potentials at least as high as that of the conductors involved; or

(d) special permission has been obtained from the district electrical-mechanical engineer and under such conditions and precautions as he may require. *New*.

TROLLEY WIRES

501. Trolley lines shall be isolated by elevation and, where necessary, guarded. 1961-62, c. 81, s. 532. Guarding and isolation
502. In underground workings, trolley lines shall, Requirements for trolley lines underground
- (a) be isolated by an elevation of not less than six feet;
 - (b) operate at a potential not exceeding 300 volts to ground;
 - (c) be effectively guarded. 1961-62, c. 81, s. 533.

LIGHTING

503. The operating voltage of a lighting circuit shall not exceed 300 volts and the voltage to ground of a conductor shall not exceed 150 volts, but this section does not apply in the case of electric locomotives and cranes using direct current. 1961-62, c. 81, s. 534. Maximum operating voltage
504. The neutral conductor on lighting circuits shall be identified by a white braid covering or other equivalent means. 1961-62, c. 81, s. 535. Neutral identification
505. Portable lamps shall have their sockets enclosed in suitably-insulated handles through which the conductors shall be carried and shall have a protective cage that encloses the lamp. 1961-62, c. 81, s. 536. Portable hand lamps

WIRING IN EXPLOSIVES AND BLASTING AGENTS STORAGE

506. All electrical wiring in explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings, or cap and fuse houses, shall be installed in rigid conduit with screwed water-tight joints or shall be armoured, moisture-proof cable. 1961-62, c. 81, s. 537. General
507. All conduit, armour, fittings and fixtures shall be permanently grounded. 1961-62, c. 81, s. 538. Grounding
508. The switches and fuses for lighting, heating or telephone circuits for explosives or blasting agents magazines, thaw houses, detonator or blasting cap storage buildings and cap and fuse houses shall be in a fire-resistive cabinet located outside the compartment in which explosives, blasting agents, fuses or detonators, or blasting caps, are stored. 1961-62, c. 81, s. 539. Location of control and protection

Type of
lighting
fixtures
required

509. Lighting fixtures shall be of an approved dust-tight type. 1961-62, c. 81, s. 540.

Overcurrent
protection
for lighting
circuits

510. Lighting circuits shall be protected by fuses or manual reset overcurrent devices rated at not more than 10 amperes. 1961-62, c. 81, s. 541, *amended*.

Lightning
protection

511. Circuits supplying power to explosives or blasting agents storages shall be protected against lightning surges. 1961-62, c. 81, s. 542.

Type of
heating
required

512. Heating systems for explosives or blasting agent storages or cap and fuse houses shall be of a type acceptable to the district electrical-mechanical engineer. 1961-62, c. 81, s. 543, *amended*.

Radiators
to be
grounded

513. Where a liquid is the medium used for distribution of heat for an explosive or blasting agent storage or a cap and fuse house the radiators shall be grounded. 1961-62, c. 81, s. 544, *amended*.

Fusing of
heater
circuits

514. Heater circuits shall be fused at not more than 125 per cent of normal current. 1961-62, c. 81, s. 545.

ELECTRIC BLASTING DEVICES

Construc-
tion

515. The firing device used for firing charges with electricity in accordance with subsection 7 of section 310 shall be so arranged that,

- (a) the switch mechanism will automatically return by gravity to the open position;
- (b) the live side of such device is installed in a fixed locked box and shall be accessible only to the authorized blaster;
- (c) provision is made that the leads to the face are short-circuited when the contacts of the electric blasting device are in the open position;
- (d) the box in which the electric blasting device and the short-circuiting device are mounted is provided with a lock and the door is so arranged that it cannot be closed or locked unless the contacts of the electric blasting device are open and the short-circuiting device is in place;
- (e) where electricity from 550-volt circuits is used for blasting, the device shall be electromagnetically operated, except as provided in subsection 7 of section 310.

516. When blasting cables or wires are installed in the vicinity of power or lighting cables, proper precautions shall be taken to prevent the blasting cables or wires coming in contact with the lighting or power cables. 1961-62, c. 81, s. 547. Precautions re installation of blasting cables
517. Circuits used for blasting from any source other than hand-held portable blasting devices shall be from an isolated, ungrounded power source and shall be used for blasting only. 1961-62, c. 81, s. 548, *amended*. Isolated, ungrounded power source

ELECTRIC HOISTS

518. Sections 519 to 544 apply to all electric hoists regardless of the method of operation. 1961-62, c. 81, s. 549. General
- 519.—(1) For each electric hoist, protective devices shall be provided, which, in conjunction with the mechanical braking system, shall be capable of bringing a conveyance or counterbalance safely to rest under all conditions of authorized loading, direction of travel and speed without assistance from the drive. Braking
- (2) Where supplementary electrical braking is employed, at least the same degree of safety shall be supplied. 1961-62, c. 81, s. 550. Idem
520. Except where otherwise specified, current-carrying parts of any safety device shall be so designed, installed and maintained that the failure of any such part will initiate emergency braking action to bring the hoist safely to rest. 1961-62, c. 81, s. 551. Safety requirement
521. Devices shall be installed in each hoisting compartment that, in the event of an overwound conveyance or counterbalance, shall be operated directly by the conveyance or counterbalance to initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage. 1961-62, c. 81, s. 552. Track limits required for overwind protection
522. Devices shall be installed for each hoisting compartment that, in the event of an underwound conveyance or counterbalance, shall initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 553. Underwind protection required

Overwind
and
underwind
require-
ments for
high-speed
hoists

523. Devices, driven from the operating drum or drums, shall be installed, where the hoist operates at a rope speed of 750 feet per minute or greater, that, in the event of an overwound or underwound conveyance or counterbalance, will initiate an emergency stop and bring the conveyance or counterbalance to rest safely before it or its rope attachments meet any obstruction to its free passage, except that, in the case of shaft sinking the protection for an underwound conveyance or counterbalance may be dispensed with. 1961-62, c. 81, s. 554.

Overspeed

524. Each electric hoist shall have installed a device that will initiate an emergency stop and bring the conveyance or counterbalance to rest safely should the rope speed exceed the authorized maximum by a predetermined amount. 1961-62, c. 81, s. 555.

Enforced
slowdown

525. Devices, driven from the operating drum or drums, shall be installed where the hoist operates at a rope speed of 750 feet per minute or greater, that will enforce any necessary reduction in speed as the conveyance approaches the end of travel. 1961-62, c. 81, s. 556.

Adjustment
of protec-
tive devices

526. No person shall alter the adjustment of any protective device without proper authority. 1961-62, c. 81, s. 557.

Inter-
mediate
obstructions

527.—(1) Where ore or waste dumps, loading boxes or spill-doors are installed in a shaft or winze at points other than the upper and lower limits of normal travel of a conveyance and where any part of such dump box or door interferes with the free passage of a conveyance, there shall be installed,

(a) travel-limiting devices;

(b) travel-limiting devices as required to section 523, where applicable;

(c) enforced slow-down devices as required by section 525, where applicable; and

(d) positive locking devices for maintaining such obstructions out of the operating position in the shaft or winze.

Idem

(2) The manager, or his agent, of a mine employing such an intermediate obstruction shall provide a procedure to be followed to ensure the safe operation of the installation.

- (3) Before such an installation is made, plans and procedure shall be submitted to the chief engineer for approval. 1961-62, c. 81, s. 558. ^{Idem}
528. Emergency braking action shall be initiated to bring a conveyance or counterbalance to rest safely before it or its rope attachments reach any obstruction to its free passage in the event of, ^{Protection required for hoist electrical system}
- (a) the failure of the power supply to the hoist electric system;
 - (b) an overload on the hoist-drive motors of a magnitude and duration exceeding what would be considered an operating overload; or
 - (c) a short-circuit on the hoist electric system. 1961-62, c. 81, s. 559.
- 529.—(1) Every electric hoist shall have installed a device to enable a conveyance or counterbalance to be removed from an overwound or underwound position. ^{Backout}
- (2) Every such device shall be manually operable only. 1961-62, c. 81, s. 560. ^{Idem}
- (3) Every such device shall be so designed and installed that the brake or brakes holding a conveyance or counterbalance, when in an overwound or underwound position, cannot be released until sufficient drive motor torque has been developed to ensure movement of the conveyance or counterbalance in the correct direction only. *New.* ^{Backout switch, motor torque-brake interlock}
530. A manually-operable switch shall be installed for each electric hoist within reach of the manual controls that will, when operated, initiate emergency braking action to bring the conveyance or counterbalance safely to rest. 1961-62, c. 81, s. 561. ^{Emergency switch}
531. An underwind by-pass switch may be installed, where necessary, that will allow the conveyance to be lowered through the underwind position if it is held in the closed position by the hoistman and will return automatically to the open position when not so held. 1961-62, c. 81, s. 562. ^{Underwind by-pass switch}
532. Each electric hoist shall have installed, within plain view of the manual controls, a meter that will indicate, at all times, the hoist motor load. 1961-62, c. 81, s. 563. ^{Load meter required}

Man-safety
require-
ments

533.—(1) Where men are transported in skips or the skips of skip-cage assemblies, there shall be installed a device that will prevent the conveyance, carrying the men, from entering the dumping position.

Idem

(2) Except in shaft sinking, such device shall be so installed that, when it is put into operation, a distinctive signal will be given, automatically, to men about to enter the conveyance.

Idem

(3) Such device is not required on electric hoists where men are hoisted for shaft inspection or maintenance operations only.

Idem

(4) Such device shall be put into operation, either manually or automatically, when men are transported.

Idem

(5) In those cases where the device is automatically put into operation by the hoistman's return of the 3-bell signal, the circuit shall be so arranged that the failure of the relay coils will not render the device inoperative. 1961-62, c. 81, s. 564.

Approach
warning
signal

534. Each electric hoist shall have installed a device whereby the hoistman is warned, audibly, that a conveyance or counterbalance is about to enter the region where a reduction in speed is necessary for safe manual braking. 1961-62, c. 81, s. 565.

Automatic
hoists

535. Sections 536 to 544 apply to all electric hoists that may be operated automatically. 1961-62, c. 81, s. 566.

Selection of
manual or
automatic
control

536.—(1) Every electric hoist shall have installed, only in the same location as the manual controls, a device for the change-over from manual to automatic control.

Idem

(2) Such device shall be operated by authorized personnel only. 1961-62, c. 81, s. 567.

Level or
cage control

537. Where an electric hoist is designed to be operated from control stations on the levels or from a control station on the conveyance, any device used to effect the change-over of control shall be operable only at the level at which a conveyance is stopped. 1961-62, c. 81, s. 568.

- 538.—(1) Devices installed on the levels for the purpose of selecting the conveyance's destination and for initiating hoist motion shall be operable only when the conveyance is stopped at that level, except where the installation has been approved for call operation. ^{Operation of level-installed controls}
- (2) There shall be a minimum delay of five seconds between the operation of the level control device used to initiate hoist motion and the actual motion when men are being handled. ^{Idem}
- (3) The level control device used to initiate hoist motion shall be so located that it may be operated by someone in the conveyance stopped at that level. ^{Idem}
- (4) Devices installed on the levels for the purpose of initiating hoist motion shall, except for jogging, be operable only when the shaft gate at the level at which the conveyance is stopped is in the closed position. 1961-62, c. 81, s. 569. ^{Idem}
- 539.—(1) Devices installed in a conveyance for the purpose of controlling hoist motion shall, except for jogging, be operable only when the cage door is in the closed position. ^{Operation of cage-installed control}
- (2) Where devices are installed in a conveyance for the purpose of controlling hoist motion, one of the devices shall be capable of initiating emergency braking action to bring the conveyance safely to rest. 1961-62, c. 81, s. 570. ^{Idem}
540. Sections 541 to 544 apply to all electric friction hoists. 1961-62, c. 81, s. 571. ^{Friction hoists}
541. Each electric friction hoist shall have installed a device that will initiate emergency braking action to bring the drum to rest in the event of the occurrence of slip between the hoisting rope or ropes and the hoist drum, such as might occur with a conveyance or counterbalance jammed in the shaft or caught at the end of travel. 1961-62, c. 81, s. 572. ^{Jammed conveyance device}
542. Where creep or slip may alter the effective position of safety devices, a means of synchronizing the safety devices with the position of the conveyance in the shaft shall be provided. 1961-62, c. 81, s. 573. ^{Synchronizing device}
543. If the district electrical-mechanical engineer deems it necessary, he may, after consultation with the manager, conduct or require to be conducted specific ^{Special testing}

tests of the efficiency of all electric overwind and underwind devices, signalling and warning devices and hoisting controls and equipment. 1961-62, c. 81, s. 574, *amended*.

Electrical
Hoisting
Equipment
Record
Book

544.—(1) The manager of a mine where an electric hoist is in use shall depute some competent person or persons whose duty it is to examine at least once in each week the hoist motor and control apparatus, electric safety devices and hoisting signalling equipment. 1961-62, c. 81, s. 575 (1), *amended*.

Idem

(2) The report of such examination shall be recorded as provided in subsection 3. 1961-62, c. 81, s. 575 (2).

Idem

(3) The manager shall keep or cause to be kept at the mine for each hoist a book called the Electric Hoisting Equipment Record Book in which shall be recorded a report of every such examination and a notation of any failure or accident to such equipment and the action taken regarding it, signed by the person making the examination. 1961-62, c. 81, s. 575 (3), *amended*.

Idem

(4) Such entries of the weekly examination shall be read and signed every week by the person in charge of such equipment or accessories thereto.

Idem

(5) A notation of the action taken regarding the report of any failure or accident to any part of the electrical equipment used in connection with the hoist or the signalling equipment shall be made over the signature of the person in charge of such equipment or accessories thereto. 1961-62, c. 81, s. 575 (4, 5).

Idem

(6) The Electrical Hoisting Equipment Record Book shall be made available to the district electrical-mechanical engineer at all times. 1961-62, c. 81, s. 575 (6), *amended*.

UNDERGROUND ELECTRICAL INSTALLATIONS

General

545. The provisions of this Part that apply to surface electrical installations apply equally to underground electrical installations, except sections 546 to 563, which apply only to underground electrical installations. 1961-62, c. 81, s. 576, *amended*.

Control of
under-
ground
feeders

546.—(1) Where electrical energy is taken underground, provision shall be made so that the current may be cut off on the surface.

- (2) The control device shall be accessible to authorized ^{Idem} persons only. 1961-62, c. 81, s. 577.

547.—(1) Conductors for all circuits not over 150 volts ^{Wiring methods} to ground shall either be installed in standard conduits, armoured or have non-flammable jackets and be adequately supported. 1961-62, c. 81, s. 578 (1).

- (2) All fixed conductors transmitting power underground ^{Idem} at over 150 volts to ground shall be installed in standard conduits or armoured, shall be adequately supported, and any outer jacketing shall be of a non-flammable type.

- (3) Open-type wiring shall not be used except in cases ^{Idem} of emergency. 1961-62, c. 81, s. 578 (2, 3), *amended*.

548. All new cables purchased for the transmission of ^{Cable test required} power underground at a potential in excess of 750 volts shall be accompanied by the manufacturer's certified report of insulation tests, a copy of which shall be filed with the chief engineer. 1961-62, c. 81, s. 579.

549.—(1) All cables transmitting power underground at ^{Cable rating} a potential exceeding 750 volts shall have a voltage rating of 50 per cent higher than the normal operating voltage. 1961-62, c. 81, s. 580 (1).

- (2) Cable of standard rating for the normal operating ^{Idem} voltage may be used where the cable is supplied through a circuit-breaker from a circuit where the neutral point is grounded in such a manner as to,

(a) limit ground fault current; and

(b) limit the possible rise of ground fault potential on any connected equipment to a maximum of 100 volts,

and where ground fault protection is provided. 1961-62, c. 81, s. 580 (2), *amended*.

550. The armouring or casings of all cables shall be ^{Bonding requirements} bonded together so as to be electrically continuous and shall be connected at some point or points to a satisfactory ground on surface. 1961-62, c. 81, s. 581.

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| Adequate grounding for equipment | 551. Where the armouring or casings of cables do not provide an adequate grounding system for underground electrical equipment, a copper or other non-corrosive grounding conductor of adequate size shall be run from such equipment to a satisfactory ground on surface. 1961-62, c. 81, s. 582. |
| Terminating facilities | 552. Suitable terminating facilities shall be provided to protect cables from harm due to moisture or mechanical damage. 1961-62, c. 81, s. 583. |
| Location of junction boxes | 553. Junction boxes on a cable transmitting power at a potential exceeding 300 volts shall not be located in a shaft or winze or attached to any timbers at a shaft or winze station or headframe. 1961-62, c. 81, s. 584. |
| Approval of splices | 554. Splices shall not be made in shaft or winze conductors unless approved by the district electrical-mechanical engineer. 1961-62, c. 81, s. 585, <i>amended</i> . |
| Protection of signal and telephone cables | 555. Adequate precautions shall be taken to prevent signal and telephone cables from coming into contact with other electric systems. 1961-62, c. 81, s. 586. |
| Maximum voltage of signal system | 556. The operating voltage on signal systems shall not exceed 150 volts to ground. 1961-62, c. 81, s. 587. |
| Grounding of signal system | 557.—(1) One conductor of the two-wire signal circuit shall be grounded where the power supply is obtained from a transformer having a primary voltage in excess of 750 volts. |
| Idem | (2) The signal system may be operated with both conductors ungrounded when the supply is from a transformer having a primary voltage in excess of 750 volts, if an insulating transformer having a 1-to-1 ratio is installed between the supply and the signal system. 1961-62, c. 81, s. 588. |
| Separate signal for each conveyance | 558. Where an electrical hoisting-signal system is installed at a shaft or winze, there shall be a suitable, separate, audible signal system for the control of each hoisting conveyance operated from a single hoist and there shall be a sufficient difference in the sound of the signals to the hoistman that they are easily distinguishable and it shall be so arranged that the hoistman can return the signal to the person giving the signal. 1961-62, c. 81, s. 589. |

559. The type and location of transformers installed underground are subject to the approval of the district electrical-mechanical engineer. 1961-62, c. 81, s. 590, *amended*. ^{Transformers, type and location}
- 560.—(1) All transformers over 2 kva, unless insulated with non-flammable di-electric liquids or Class B or Class C insulation, when installed underground, shall be effectively isolated from the mine workings by enclosure in rooms constructed of fire-resistive materials throughout and a door sill of not less than six inches in height shall be provided. ^{Transformers and transformer rooms}
- (2) No material or equipment of any kind, including air lines, air ducts, water and steam lines, shall pass through or terminate within the room, other than that essential to the transformer installation for its proper operation and safety. ^{Idem}
- (3) The covers of the ventilation openings shall be held open by thermal fuse links and shall close by gravity, and the door shall be constructed of steel or other suitable material. 1961-62, c. 81, s. 591 (1-3). ^{Idem}
- (4) No installation of transformers containing a liquid which will burn in air shall be located within 200 feet of an explosives or blasting agents storage. ^{Idem}
- (5) For installations of transformers containing a liquid which will not burn in air or other suitable types, separation shall be not less than 50 feet from an explosives or blasting agents storage. 1961-62, c. 81, s. 591 (4), *amended*. ^{Idem}
- 561.—(1) The supports for electric motors, transformers, control and protective equipment and other electric equipment and the compartments in which they are installed shall be of such material and constructed in such a manner as to reduce the fire hazard to a minimum. ^{Fire prevention underground}
- (2) No flammable material shall be stored or placed in the same compartment with any such equipment. 1961-62, c. 81, s. 592. ^{Idem}
562. Where lamps or heating units are used underground, they shall be so installed and protected as to prevent the heat generated from becoming a fire hazard. 1961-62, c. 81, s. 593. ^{Electric heaters}

Fire-ex-
tinguishing
devices

563.—(1) Approved fire-extinguishing devices for use on electrical fires shall be provided and maintained in condition for immediate use.

Idem

(2) They shall be conveniently mounted at or in every place containing electrical equipment having flammable insulation or parts that, once ignited, may support combustion. 1961-62, c. 81, s. 594.

ELEVATORS

Interpre-
tation

564.—(1) In this section,

(a) “attendant” means a person who, as a whole or a part of his normal duties,

(i) operates an elevator or incline lift, or

(ii) supervises the loading, passage or unloading of persons on an incline lift;

(b) “dumbwaiter” means a hoisting and lowering mechanism equipped with a conveyance which moves in guides in a substantially vertical direction, the floor area of which does not exceed 9 square feet, whose total inside height whether or not provided with fixed or removable shelves does not exceed 4 feet, the capacity of which does not exceed 500 pounds, and which is used exclusively for carrying materials;

(c) “elevating device” means an elevator, escalator, dumbwaiter, incline lift or manlift and includes its hoistway enclosure;

(d) “elevator” means a mechanism affixed to a building or structure equipped with a conveyance or platform that moves in guides at an angle exceeding 70 degrees from the horizontal and that is used to lift or lower persons or freight in or about the building or structure;

(e) “escalator” means a power-driven inclined continuous stairway used for raising or lowering persons;

(f) “freight elevator” means an elevator primarily used for carrying freight and on which only the attendant and the persons necessary for unloading and loading the freight are permitted to ride;

- (g) "incline lift" means a mechanism having a power-driven rope, belt or chain, with or without handholds or seats, for lifting or lowering persons or freight on an incline of 70 degrees or less from the horizontal;
 - (h) "manlift" means a device consisting of a power-driven endless belt provided with steps or platforms and handholds attached to it for the transportation of persons from floor to floor;
 - (i) "passenger elevator" means an elevator used primarily to carry persons.
- (2) Elevating devices, except those covered in subsection 3, shall be designed, installed and maintained in accordance with the edition that is current from time to time of C.S.A. Standard B44, "Safety Code for Elevators, Dumb-waiters and Escalators". Accepted standards
- (3) Aerial tramways, incline lifts and manlifts shall be of a type approved by the chief engineer. Idem
- (4) This section does not apply to, Where section does not apply
- (a) feeding machines, or belt, bucket, scoop, roller or any similar type of freight conveyor;
 - (b) a lifting device that is,
 - (i) part of a conveyor system,
 - (ii) mechanically loaded and unloaded, and
 - (iii) so fenced in or guarded as to prevent persons from accidentally entering the hoistway;
 - (c) freight ramps having a means of adjusting the slope of the ramp;
 - (d) freight platforms having a rise of sixty inches or less;
 - (e) lubrication hoists or other similar mechanisms;
 - (f) piling or stacking machines used within one storey; or
 - (g) a moving walk.

New in-
stallations,
etc.

- (5) No person shall commence a new installation or a major alteration of an elevator, dumbwaiter, escalator, manlift or incline lift until the drawings and specifications thereof have been approved by the chief engineer.

Drawings
and
specifica-
tions

- (6) The drawings and specifications shall be submitted in duplicate and shall furnish full information as to the size, composition and arrangement of the proposed installation or major alteration.

Inspection
and
approval

- (7) Upon completion of an installation or major alteration, the elevating device shall not be put into use until it has been inspected and approved by the district electrical-mechanical engineer.

Notices
required

- (8) There shall be kept, securely fastened and conspicuously displayed,

(a) in the conveyance of each elevator, dumbwaiter or incline lift; and

(b) as close as is practicable to the bottom landing of each manlift,

a notice, in the form of a metal plate, setting forth the maximum capacity of the elevating device, stating the number of persons and the weight in pounds.

Idem

- (9) Every freight elevator shall have displayed in a conspicuous place in the conveyance a notice in letters not less than one inch high:

"This is not a passenger elevator. No person other than the attendant and freight handlers are permitted to ride in this conveyance".

Ceilings

- (10) The ceiling and its supporting structure over every passageway or other occupied space under an elevating device shall be designed, constructed and maintained so as to safely support the loads that would be applied to it if the conveyance and counterweight dropped.

Idem

- (11) Where the conveyance and counterweight are both equipped with devices to stop them or arrest their descent in the event of a failure of their supports, the strength of the ceiling and its supporting structure may be reduced accordingly.

- (12) There shall be provided safe and convenient access ^{Machine rooms} to every machine room and machinery space.
- (13) Except where otherwise permitted by the chief ^{Idem} engineer, such access shall be by a stairway that is not located in the hoistway.
- (14) Every machine room and machinery space shall be ^{Idem} enclosed or located so that unauthorized persons cannot have access to the machine room or machinery space.
- (15) Only machinery and control equipment required for ^{Idem} the operation of the elevating device shall be permitted in the machine room.
- (16) Sprinklers, pipes, drains, tanks or similar equipment ^{Idem} which might leak or cause condensation shall not be located directly above the machine or control equipment.
- (17) No person under the age of eighteen years shall be ^{Attendants} authorized to operate an elevator.
- (18) Subject to subsection 19, an attendant is required for ^{Idem} every elevator or incline lift.
- (19) An attendant is not required on an elevator or ^{Idem} incline lift equipped with automatic controls and emergency stopping devices that will, in the opinion of the chief engineer, ensure the safety of any person having access to or riding on the elevator or incline lift.
- (20) Every landing shall be adequately lighted. ^{Lighting required}
- (21) No person shall remove, displace, interfere with or ^{Test and repair} damage any device installed in or about an elevating device for its safe operation, except,
- (a) a district electrical-mechanical engineer making an inspection, or
 - (b) a qualified person for the purpose of making a test or repair.
- (22) Where a safety device has been removed, displaced, ^{Restoration of service after damage} interfered with or damaged, the elevating device shall not be used or operated for any purpose other than testing, inspection or repair until the safety device has been restored to working order.

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| Inspection | (23) The ropes, safety devices, signalling devices, doors and other electrical and mechanical equipment necessary to the safe operation of elevating devices shall be inspected by a qualified person at least once each month and the results recorded. |
| Records | (24) The records of such inspections shall be made available to an engineer. |
| Ropes not to be spliced | (25) Hoisting or tail ropes shall not be lengthened or repaired by splicing. <i>New.</i> |

CONSTRUCTION, SURFACE

Interpre-
tation,
ss. 565-596

565.—(1) In this section and in sections 566 to 596,

- (a) “allowable unit stress” means the allowable unit stress assigned to the material by the issue that is current from time to time of the National Building Code of Canada or similar recognized authority, or in the absence of a recognized authority, by a professional engineer, based on good engineering practice;
- (b) “boom of a crane” means the projecting part of a crane from which the load is supported;
- (c) “constructor” means a person who contracts with the owner or agent of a project for the work thereon, and includes an owner or agent who,
 - (i) contracts with more than one person for the work on a project, or
 - (ii) undertakes the work on a project or any part thereof;
- (d) “excavation” means an excavation on a project, and includes a trench, other than a trench excavated for prospecting purposes;
- (e) “extension trestle ladder” means a self-supporting combination of a trestle ladder and a vertically-adjustable single ladder, with a suitable means for locking the ladders together;
- (f) “falsework” means the structural supports and bracing for forms;

- (g) "form" or "formwork" means the mould into which concrete is placed;
- (h) "framed structure" means a structure designed to act as a unit composed of members so connected to one another that a load applied to any member of it may alter the stresses induced in the other members, and includes a truss, a tubular metal frame and a column where the effective length is dependent upon the provision of lateral restraints between the ends of the column;
- (i) "ladder-jack" means a device attached to a ladder used for supporting a scaffold;
- (j) "life jacket" means a life jacket bearing a Department of Transport, Canada Approval Number for a body weight more than 90 lb.;
- (k) "life-net" means a net of adequate strength so placed and supported as to safely catch a person who might fall into it;
- (l) "means of egress" means a passageway, ramp, runway, stairway or ladder leading to an exit from a building, structure or excavation;
- (m) "outrigger scaffold" means a scaffold that is supported by rigid members cantilevered out from the structure to which they are anchored;
- (n) "project" means,
 - (i) a building or other structure that is being constructed, altered, repaired, demolished or moved, or
 - (ii) a roadway that is being built, altered, repaired, demolished or moved;
- (o) "recommended load" means the load established for a scaffold for the particular method of loading by a professional engineer based on the test loading of a tubular metal frame and its accessories and which shall not exceed one third of the failure load when the frame is tested by loading axially through the corner posts;

- (p) "stable slope" means the slope at which the wall of an excavation in soil will safely remain in place without extra support, during the time period when the walls of the excavation will be unsupported;
- (q) "subcontractor" means a person who contracts with a constructor for the work on part of a project and includes a person who contracts with a subcontractor for work on a part of the project;
- (r) "supplier" means an owner of any machine, vehicle, tool or other equipment who provides under any rental, leasing or other arrangement, such equipment for use by a person on a project;
- (s) "trestle ladder" means a self-supporting portable ladder, non-adjustable in length, consisting of two sections hinged at the top to form equal angles with the base.

Applica-
tion of
ss. 566-596

- (2) Except where a contrary intent is provided, this section and sections 566 to 596 apply only to construction operations on the surface of a mining premises or at a plant. *New.*

Responsi-
bility of
contractors
and sub-
contractors

- 566.—(1) The responsibilities of contractors and subcontractors on a project in connection with the requirements of this section and sections 566 to 573 are as prescribed in subsection 12 of section 169.

Machines
to be
in safe
condition

- (2) No supplier shall provide any machine, vehicle, tool or equipment, or any part thereof, for use by a person on a project under any rental, leasing or other arrangement if such machine, vehicle, tool, equipment or part is in an unsafe condition.

Shift
bosses

- (3) Every constructor and every subcontractor shall appoint one or more competent persons to exercise direction and control over persons employed by him on each shift, and one such person may be himself. *New.*

Traffic
control

- 567. Where one or more persons may be endangered by passing vehicular traffic on a road on a project, one or more of the following safeguards located at a

suitable distance from the employees shall be provided as appropriate to give them adequate protection:

1. One or more flagmen.
2. Warning signs.
3. Barriers.
4. Lane control devices.
5. Flashing lights or flares. *New.*

568.—(1) In applying the requirements of sections 566 to 596, Applica-
tion, alter-
native
methods
and
materials

- (a) the composition of an object; and
- (b) the size and arrangement of material of an object may vary from that prescribed, but only to the extent that the strength of the object and the safety of its use by persons is equal to or greater than the strength and safety as prescribed and where any conflict arises in the application of these sections as to whether the variation and composition of material of the object or the size and arrangement of material of the object is equal to that prescribed, an engineer's opinion prevails.

(2) In applying subsection 1, the written opinion of the Idem
chief engineer takes precedence. *New.*

GENERAL

569.—(1) During the construction, alteration, repair, Capacity
to support
loads
dismantling, demolition or moving of a building or other structure, all parts thereof shall be,

- (a) capable of safely supporting the loads to which they may be subjected; or
- (b) adequately braced, either permanently or temporarily, to safely support the loads to which they may be subjected.

(2) All areas in which persons are present, and the means Lighting
of access to and egress from such areas, shall be adequately lighted.

Protection
of floor
openings

- (3) Every opening in a floor or other surface used by persons shall,
 - (a) be protected by a guardrail; or
 - (b) be covered with securely fastened planks or other material capable of supporting any load likely to be imposed thereon.

Flooring

- (4) During construction of a building, temporary or permanent flooring shall,
 - (a) be installed progressively so that the flooring will be provided prior to a person being required to work in a position exceeding two storeys above such flooring or three storeys where the vertical distance between column splices exceeds two storeys;
 - (b) where used as a working surface, extend over the whole area except for necessary openings which shall be protected by a guardrail;
 - (c) consist of material providing strength sufficient to support any load likely to be applied and at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a span of ten feet;
 - (d) be securely fastened to and supported on girders, beams or other structural members capable of safely supporting the applied loads; and
 - (e) not be required where the work is being done from a scaffold.

Overhead
protection

- (5) Overhead protection, at least equal to sound No. 1 Construction Grade Eastern Spruce planking two inches thick and ten inches wide with a maximum span of ten feet shall be provided,
 - (a) at every means of access to and egress from a building or other structure during construction or demolition where there is danger of material falling on a person;
 - (b) above a scaffold, where there is danger of material falling on a person on the scaffold; and

- (c) above an area where a person is required to be directly below other work being done, and there is danger of material falling on the lower person.
- (6) A sufficient number of signs bearing the word ^{Danger} "DANGER" in clearly distinguishable lettering ^{signs} shall be posted,
- (a) where a covering prescribed by subsection 3 has been temporarily removed while work is being done which cannot be done with the covering installed;
 - (b) where the installation of a guardrail is prescribed by the requirements of section 586, and the guardrail has temporarily been removed while work is being done which cannot be done with the guardrail installed;
 - (c) adjacent to a hoisting area;
 - (d) under a suspended scaffold; and
 - (e) at the outlet end of a chute. *New.*
- 570.—(1) Where a structure has suffered damage likely ^{Damaged} to endanger the safety of a person by collapse of all or part of it, the structure shall be braced and shored or other measures taken to prevent injury to a person until the structure is demolished, dismantled, or repaired. ^{structures}
- (2) The bracing and shoring prescribed in subsection 1 ^{Idem} shall be installed progressively so as to provide for the safety of persons installing the bracing and shoring. *New.*
- 571.—(1) Means of access to and egress from every ^{Access and} excavation, floor, roof, platform and scaffold, other ^{egress from} work areas than a suspended scaffold, where work is being performed, shall,
- (a) be by a stair, runway, ramp or ladder; and
 - (b) be maintained in a safe condition at all times.
- (2) Every means of access and egress prescribed by ^{Idem} subsection 1 and every scaffold from which work is being performed shall,
- (a) be kept clear of obstructions;

- (b) be kept clear of ice, snow or other slippery materials; and
- (c) when necessary to ensure firm footing, be sprinkled with sand or other suitable abrasive material.

Where
stairs
planned

- (3) When work on a building or other structure in which stairs are intended to be part of the permanent building or structure has progressed to two storeys or thirty feet above the lowest floor level, whichever is the lesser, the means of egress shall be by permanent or temporary stairs that shall,
 - (a) be provided for the entire height from the lowest floor level to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and
 - (b) be continued as the height of the project is increased.

Where
stairs not
planned

- (4) When work on a building or other structure intended to be 100 feet or more in height, and in which stairs are not intended to be part of the permanent building or structure, is in progress, the means of egress shall be by temporary stairs that shall,
 - (a) be provided for the entire height from the ground to the uppermost working level, except where the stairs would interfere with work on the uppermost working level, in which case stairs shall be provided to within two storeys or thirty feet vertically, whichever is the lesser, of the uppermost working level; and
 - (b) be continued as the height of the project is increased.

Exception
to subss. 3, 4

- (5) Subsections 3 and 4 do not apply to the means of egress from a skeleton structure.

Idem,
subs. 4

- (6) Subsection 4 does not apply to a structure, including a chimney stack or pressure vessel, which has a permanent ladder attached to it as part of the

completed structure and the combined structure and ladder are fabricated before being raised into position as a unit. *New.*

- 572.—(1) No person shall be in an area where he might be exposed to injury from a noxious gas, liquid, fume or dust, or due to lack of oxygen unless he is suitably protected against the particular type of hazard. Personal protective clothing, equipment and devices
- (2) Where the injury exposure referred to in subsection 1 is from skin contact with a noxious gas, liquid, fume or dust, the protection provided shall be, Apparel
- (a) protective apparel; or
 - (b) protective skin cream suitable for the particular type of hazard.
- (3) Where the injury exposure referred to in subsection 1 is from inhalation of a noxious gas, fume or dust, or due to lack of oxygen, the protection provided shall be, Respirators
- (a) adequate mechanical ventilation; or
 - (b) the wearing of respiratory equipment suitable for the particular type of hazard.
- (4) A safety belt shall be used by a person on a structure where he is exposed to the danger of falling, and the nearest surface to which he might fall is more than ten feet below the place where he is working. Safety belts
- (5) The safety belt prescribed in subsection 4 shall be arranged so that if the person should fall he will be suspended at a distance of not more than five feet below the place where he was working. Idem
- (6) Subsections 4 and 5 do not apply, Exceptions to subss. 4, 5
- (a) to a person using a means of access or egress;
 - (b) where a life-net is installed to provide equal protection; or
 - (c) to a person who is an erector engaged in connecting structural members of a skeleton structure or in gaining access thereto.
- (7) Where a person may fall into water at a project with the risk of drowning, he shall wear a life jacket. Life jackets

- | | |
|---------------------------------|---|
| Exception
to subs. 7 | (8) Subsection 7 does not apply to shallow water in which a life jacket cannot function properly. |
| Rescue
equipment | <p>(9) In addition to the life jacket prescribed in subsection 7, rescue equipment shall be provided in a suitable location near the project and, where practicable, shall consist of,</p> <ul style="list-style-type: none"> (a) a boat in operating condition, equipped with, <ul style="list-style-type: none"> (i) a ring buoy attached to fifty feet of three-eighths of an inch manila rope, (ii) a boat hook, and (iii) two or more life jackets to provide one for each of the persons needed to properly operate the boat; and (b) where there is a current in the water, a line across the water to which there are attached floating objects capable of providing support for a person in the water. |
| Idem | (10) In locations where the water is extremely rough or swift or where a manually operated boat is not practical, the boat prescribed in subsection 9 shall be a power boat suitable for the waters involved. |
| Additional
require-
ments | <p>(11) Where this section applies,</p> <ul style="list-style-type: none"> (a) two or more persons shall be designated and shall be immediately available to perform any necessary rescue operations; (b) a suitable alarm system shall be provided; and (c) the designated persons shall immediately commence rescue operations when the alarm is given. <i>New.</i> |

PROJECT EXCAVATIONS

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|---------------------------------------|--|
| Services to
be shut off | 573.—(1) No excavation or trench shall be commenced until all gas, electrical and other services that are likely to endanger the safety of persons have been properly shut off and disconnected. |
| Stability of
adjacent
buildings | (2) No excavation shall be made that may endanger the persons on a project or the stability of an adjacent building or structure. |

- (3) The walls of an excavation shall be adequately supported by shoring and bracing, and where the excavation is a trench as defined in section 574, the requirements for shoring and bracing as defined therein apply. ^{Walls to be supported}
- (4) Subsection 3 does not apply to the walls of an excavation, ^{Exceptions to subs. 3}
- (a) less than four feet deep;
 - (b) into which persons are not required to enter for any purpose;
 - (c) cut in solid rock;
 - (d) which have been cut and trimmed to a slope having not more than one foot of vertical rise to each foot of horizontal run;
 - (e) which have been cut and trimmed to a slope steeper than that prescribed by clause *d*, and a professional engineer has certified in writing that the steeper slope is a stable slope which will not endanger persons; or
 - (f) in which persons are not required to be within a horizontal distance of the walls equal to the height of the walls.
- (5) The walls of an excavation shall be stripped of loose rock or other material which might slide, roll or fall upon persons below. ^{Walls to be scaled}
- (6) A clear and reasonably level area extending at least two feet back shall be maintained free of all materials at the top of the walls of an excavation. ^{Flat area at top of walls}
- (7) No vehicle or other machinery shall be driven or operated or located so close to the edge of an excavation as to affect the stability of the walls of the excavation by vibration or otherwise and endanger the safety of any person. ^{Vehicles and machinery}
- (8) The top of the walls of an excavation shall be protected by an adequate barrier at least forty-two inches high if, ^{Barriers}
- (a) the depth of the excavation exceeds ten feet; and

- (b) the safety of a person can be endangered by falling into the excavation.

Warning
lights

- (9) When a person is employed adjacent to or near an excavation which is not required to be protected by a barricade as prescribed by subsection 8, warning lights shall be provided and properly maintained from one-half hour before sunset until one-half hour after sunrise and at such other times as there is equally restricted visibility.

Water

- (10) Every excavation shall be kept reasonably free of water at all times. *New.*

Interpre-
tation

- 574.—(1) In this section and in section 575, "trench" means any excavation in the ground where the vertical dimension from the highest point of the excavation to a point level with the lowest point of the excavation exceeds the least horizontal dimension of the excavation, such dimensions being taken in a vertical plane at right angles to the longitudinal centre line of the excavation.

Shoring
and
bracing
trenches,
exceptions

- (2) The requirements of this section for shoring and bracing the walls of a trench do not apply,
- (a) to a trench less than four feet deep;
 - (b) to a trench into which persons are not required to enter for any purpose;
 - (c) to a trench cut in solid rock;
 - (d) to a trench where the work therein is done only by the owner thereof in person; or
 - (e) to a part of a trench excavated for a pipeline or conduit if the trench is mechanically excavated, if the sections of the line or conduit are permanently assembled before being mechanically placed in the trench, and if the trench is mechanically back-filled.

Shoring
and
timbering

- (3) The sides of all trenches exceeding four feet in depth shall be securely shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the top of the trench, except that where the district mining engineer gives permission in writing to the person in charge of the

work in connection with the trench, the shoring and timbering need not extend above the top of the trench.

- (4) Subsection 3 does not apply where the trench is ^{Application} cut in solid rock or where the trench is excavated in hard and solid soil and does not exceed six feet in depth or where the sides of the trench are sloped to within four feet of the bottom of the trench so that the sloped sides of the trench do not have more than one foot of vertical rise to each foot of horizontal run.
- (5) Where the sides of a trench are sloped as described ^{Trench with sloping sides} in subsection 4 but not to within four feet of the bottom of the trench, the vertical walls of the trench shall be shored and timbered with good quality material in accordance with these requirements and the shoring and timbering shall extend at least one foot above the vertical walls and be fitted with toe-boards to prevent material rolling down the slope and falling into the part of the trench with vertical walls.
- (6) Drawings and specifications for the shoring and timbering of all trenches to exceed thirty feet in depth and all trenches to exceed twelve feet in width shall be submitted in duplicate to the district mining engineer and the trench shall not be commenced until the drawings and specifications have been approved by the engineer and the shoring and timbering shall conform to such approved plans. ^{Drawings for shoring and timbering}
- (7) Shoring and timbering shall be carried along with the excavating of a trench but when conditions permit ^{When shoring and timbering to be done} may be done before the excavating commences.
- (8) Where the shoring and timbering is to be removed ^{Removal of shoring} on completion of the other work in a trench, such removal shall be done by or under the personal supervision of a person experienced in removing shoring and timbering.
- (9) Ladders or other means of escape satisfactory to the district mining engineer shall be provided in every ^{Ladders to be provided} trench and such ladders or other means of escape shall be spaced at intervals of not more than fifty feet in each trench and shall extend three feet above the top of the trench.

Staging and
scaffolding

- (10) Where staging or scaffolding for handling by hand in relays materials excavated from the trench is erected independently of the shoring or timbering on the sides of the trench, it shall be structurally adequate to protect persons working thereon or in the trench from collapse of the staging or scaffolding or from falling objects.

Idem

- (11) Where the staging or scaffolding is attached to the shoring and timbering on the sides of the trench, the shoring and timbering shall be sufficiently reinforced to withstand the additional load thereby imposed on the shoring and timbering. *New.*

Interpre-
tation

575.—(1) In this section,

- (a) “cleat” means a short member of shoring and timbering that directly resists the downward movement of a strut or wale;
- (c) “sheathing” means the vertical members of shoring and timbering that directly resist pressure from the side of a trench;
- (d) “strut” means a transverse member of shoring and timbering that directly resists pressure from sheathing or wales;
- (e) “wale” means a longitudinal member of shoring and timbering that directly resists pressure from sheathing.

Methods of
shoring and
timbering
trenches

- (2) In all methods of shoring and timbering of a trench,
- (a) the sheathing shall be placed against the side of the trench so that the length of each piece of sheathing is vertical;
 - (b) the struts shall be horizontal and at right angles to the wales or sheathing supported thereby; and
 - (c) the wales shall be parallel to the bottom or the proposed bottom of the trench.

Sheathing

- (3) The sheathing shall be held securely in place against the wales or, where wales are not used, the struts by pressure being firmly exerted on the side of the sheathing adjacent to the wall of the trench.

- (4) Where the trench is excavated in, Idem

- (a) loose, sandy or soft soil;
- (b) soil that has been previously excavated; or
- (c) soil under hydrostatic pressure,

each piece of sheathing shall be driven into the bottom of the trench so as to be firmly held in place.

- (5) Each strut shall be, Struts

- (a) cut to the proper length required to fit it tightly between,

- (i) the wales, or

- (ii) where wales are not used, the sheathing,

supported by the strut; and

- (b) where necessary, held securely in place by wedges driven between the strut and,

- (i) the wales, or

- (ii) where wales are not used, the sheathing,

supported by the strut.

- (6) Each strut shall, Idem

- (a) have,

- (i) cleats that extend over the wales supported by the strut, or

- (ii) other similar devices,

attached securely to the strut by spikes or bolts; or

- (b) be placed on,

- (i) cleats spiked or bolted to posts supporting wales, or

- (ii) where wales are not used, cleats or other similar devices spiked to the sheathing.

- | | |
|--------------------------|---|
| Wales | <p>(7) Each wale shall be supported,</p> <p style="padding-left: 40px;">(a) on cleats spiked to the sheathing; or</p> <p style="padding-left: 40px;">(b) by posts set on,</p> <p style="padding-left: 80px;">(i) the wale next below it, or</p> <p style="padding-left: 80px;">(ii) in the case of the lowest wale, the bottom of the trench.</p> |
| Composition of materials | <p>(8) The composition of materials used for shoring and timbering shall be,</p> <p style="padding-left: 40px;">(a) structural Eastern Spruce; or</p> <p style="padding-left: 40px;">(b) any other structural material having strength equal to or greater than that prescribed in clause <i>a</i>.</p> |
| Members | <p>(9) Each member used for shoring and timbering shall be a solid piece of material.</p> |
| Wales in trenching | <p>(10) Where wales are used in the shoring and timbering of a trench, the smaller dimension of the wales shall be placed against the sheathing.</p> |
| Composition of materials | <p>(11) The composition of materials used for shoring and timbering may vary from that prescribed in clause <i>a</i> of subsection 8, and the size, composition and arrangement of materials used for shoring and timbering may vary from that prescribed in subsection 16, but only to the extent that the strength of the shoring and timbering is equal to, or greater than, the strength of the shoring and timbering prescribed in subsection 16.</p> |
| Arrangement of sheathing | <p>(12) Where two or more pieces of sheathing are used one above another in the shoring and timbering of a trench, the sheathing shall be arranged so that the lower pieces of sheathing,</p> <p style="padding-left: 40px;">(a) overlap the lowest wales supporting the pieces of sheathing next above it; and</p> <p style="padding-left: 40px;">(b) are firmly driven into the soil and securely supported by wales and struts as the trench is made deeper.</p> |

- (13) Subject to subsection 14, in the shoring and timbering of a trench, a trench-jack or trench-brace may be used in place of a strut prescribed by this requirement, but only if the strength of the trench-jack or trench-brace is equal to, or greater than, the strength of the strut. ^{Trench-jacks and trench-braces}
- (14) Where the trench is over four feet in width, a trench-jack or trench-brace that contains a metal pipe-spacer shall not be used. ^{Idem}
- (15) Where a wedge is used in the shoring and timbering of a trench, the thick end of the wedge shall be at least two inches wide. ^{Wedges}
- (16) Where the material used for shoring and timbering is that prescribed by clause *a* of subsection 8, the size and arrangement of materials used for shoring and timbering shall be as prescribed in, ^{Where shoring and timbering is structural Eastern Spruce}
- (a) table 1 for hard and solid soil;
 - (b) table 2 for soil that may crack or crumble;
 - (c) table 3 for loose, sandy or soft soil, or soil that has been previously excavated; or
 - (d) table 4 for soil under hydrostatic pressure,
- for depths of trenches shown in column 1 of the tables and shall have,
- (e) the pieces of sheathing,
 - (i) with a thickness and width not less than that prescribed in column 2, and
 - (ii) arranged so that the horizontal spacing from the centre of one piece of sheathing to the centre of the next piece of sheathing on the same side of the trench is not greater than the spacing prescribed in column 3;
 - (f) the wales,
 - (i) with a thickness and width not less than that prescribed in column 4, and

- (ii) arranged so that the vertical spacing from the centre of one wale to the centre of the next wale is not greater than the spacing prescribed in column 5; and

(g) the struts,

- (i) with a thickness and width not less than that prescribed in column 6, where the trench is six feet or less in width, or with a thickness and width not less than that prescribed in column 7, where the trench is twelve feet or less in width but greater than six feet in width,
- (ii) arranged so that the vertical spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 8, and
- (iii) arranged so that the horizontal spacing from the centre of one strut to the centre of the next strut is not greater than the spacing prescribed in column 9.

TABLE 1
(For hard and solid soil)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 6 but not over 10	2 x 8	6	.....	.....	4 x 4	4 x 6	4	9
2	Over 10 but not over 15	2 x 8	4½	6 x 6	4	4 x 6	6 x 6	4	9
3	Over 15 but not over 20	2 x 8	3	8 x 8	4	6 x 6	6 x 6	4	9
4	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
5	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 2
(For soil that may crack or crumble)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 8	4½	4 x 6	4	4 x 4	.....	4	9
2	Over 7 but not over 10	2 x 8	3	6 x 6	4	4 x 4	6 x 6	4	9
3	Over 10 but not over 15	2 x 8	1	6 x 8	4	4 x 6	6 x 6	4	9
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	8 x 8	4	9
5	Over 20 but not over 25	2 x 6	Width of member	10 x 10	4	6 x 8	8 x 8	4	9
6	Over 25 but not over 30	3 x 8	Width of member	8 x 12	4	8 x 8	8 x 10	4	9

TABLE 3

(For loose, sandy or soft soil or soil that has been previously excavated)

ITEM No.	DEPTH OF TRENCH Column 1	SHEATHING		WALES		STRUTS		
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8 Column 9
1	Over 4 but not over 7	Inches 2 x 8	Feet 1½	Inches 4 x 6	Feet 4	Inches 4 x 4	Inches 4 x 6	Feet 4 9
2	Over 7 but not over 10	2 x 6	Width of member	6 x 8	3	4 x 6	6 x 6	3 9
3	Over 10 but not over 15	2 x 6	Width of member	8 x 8	4	6 x 6	6 x 6	4 9
4	Over 15 but not over 20	2 x 6	Width of member	8 x 10	4	6 x 6	6 x 8	4 9
5	Over 20 but not over 25	3 x 8	Width of member	8 x 10	4	6 x 8	8 x 8	4 9
6	Over 25 but not over 30	3 x 8	Width of member	10 x 10	4	8 x 8	8 x 8	4 9

TABLE 4
(For soil under hydrostatic pressure)

ITEM No.	DEPTH OF TRENCH	SHEATHING		WALES		STRUTS			
		Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
	Column 1								
	Feet	Inches	Feet	Inches	Feet	Inches	Inches	Feet	Feet
1	Over 4 but not over 7	2 x 6	Width of member	6 x 8	4	4 x 4	6 x 6	4	9
2	Over 7 but not over 10	2 x 6	Width of member	6 x 10	3	4 x 6	6 x 6	3	9
3	Over 10 but not over 15	3 x 8	Width of member	10 x 10	3½	6 x 6	6 x 6	3½	9
4	Over 15 but not over 20	3 x 8	Width of member	10 x 12	3½	8 x 8	8 x 8	3½	9
5	Over 20 but not over 25	4 x 8	Width of member	10 x 14	3	8 x 8	8 x 10	3	9
6	Over 25 but not over 30	4 x 8	Width of member	14 x 14	3	8 x 10	10 x 10	3	9

New.

HOUSEKEEPING

- 576.—(1) No tool or other object shall be placed where ^{Tools} it may endanger a person.
- (2) Formwork ties protruding from concrete shall be ^{Formwork ties} removed or cut off at the surface of the concrete as soon as is practicable after removal of the formwork.
- (3) Protruding nails in lumber or scrap material shall be ^{Protruding nails} removed or bent so as not to be a source of danger to persons.
- (4) Waste material and debris on a project shall be ^{Debris} removed to a suitable disposal area as often as necessary to prevent a hazardous condition, but not less frequently than daily.
- (5) Rubbish, debris and other materials shall, ^{Rubbish}
- (a) not be permitted to fall freely from one level to another; and
 - (b) be lowered by a chute or in a suitable container.
- (6) Large objects of rubbish, debris or other similar ^{Idem} material shall be lowered by crane, hoist or other suitable means.
- (7) Subsections 5 and 6 do not apply to a demolition ^{Idem} project where material falls or is dropped into a designated area which is adequately enclosed and to which persons do not have access.
- (8) Every chute shall, ^{Chutes}
- (a) be well constructed and rigidly fastened;
 - (b) if at more than 45 degrees to the horizontal, be enclosed on four sides;
 - (c) where of the open type, be inclined at an angle of 45 degrees or less to the horizontal; and
 - (d) have a strong gate at the bottom end where necessary to control the flow of material from the chute.

Idem

(9) The entrance to a chute shall,

- (a) be so constructed as to prevent hazardous overspill when rubbish, debris or other materials are being deposited into the chute;
- (b) have 4-inch by 4-inch or larger curb or cleat where the entrance is at or below the floor level;
- (c) be not more than four feet high; and
- (d) be kept closed when not in use. *New.*

STORAGE OF MATERIALS

Handling
of materials

577.—(1) Material to be used on or removed from a project,

- (a) shall be stored in an orderly manner and so as not to endanger the safety of persons;
- (b) when being moved or transported on the project, shall be moved only in such a manner that the material cannot endanger the safety of persons; and
- (c) when it is to be off-loaded from a vehicle or stockpile, shall not have any blocking or binder that is required to maintain the material in a safe position removed until the removal of the blocking or binder will not allow the material to shift and endanger the safety of persons.

Storage
of materials

(2) Building materials or equipment shall not be placed or stored on a permanent or temporary structure so as to exceed the safe loadings of the structure or any part thereof.

Idem

(3) No building material shall be stored, stacked or piled within six feet of,

- (a) a floor or roof opening;
- (b) the open edge of a floor, roof or balcony; or
- (c) an excavation.

- (4) Subsection 3 does not apply to small masonry units, ^{Masonry units} including bricks and blocks, which can be handled by one person and the material is,
- (a) to be used at the edge of,
 - (i) a floor,
 - (ii) a roof,
 - (iii) an opening in a floor, or
 - (iv) an opening in a roof; and
 - (b) the height of the pile is less than the distance of the pile from the edge described in clause a.
- (5) Lumber, structural steel and similar materials shall ^{Storage of lumber, steel, etc.} be stored so that the pile is secure against collapsing or tipping.
- (6) A pile of lumber more than four feet high shall have ^{Idem, lumber} cross pieces to provide stability.
- (7) Masonry units shall be stacked, ^{Masonry units when stacked}
- (a) on level wooden planks, a platform or other level base;
 - (b) in tiers throughout a pile;
 - (c) so that a vertical face of a pile is not over seven feet in height;
 - (d) when the pile is more than seven feet in height, by progressively stepping the pile back from the vertical faces;
 - (e) when the pile is more than seven feet in height, with wood strips between tiers to provide stability; and
 - (f) with header units in the pile where necessary to provide stability.
- (8) Bagged material shall be, ^{Bagged material}
- (a) piled with cross-piles on the exterior of the pile to prevent movement of the bags;

(b) piled not more than ten bags high at a vertical face of a pile, except where the pile is in a storage bin or enclosure and the face of the pile is supported by the walls of the storage bin or enclosure; and

(c) removed from a pile so that the top of the pile is kept approximately level.

Pipe and
steel

(9) Pipe and reinforcing steel shall be stacked in substantially supported and braced racks or frames unless some other provision is made to prevent their movement.

Flammable
liquids

(10) No flammable liquid in excess of one day's supply in safe containers shall be stored in a building or structure except in a room with sufficient window area to provide explosion relief to the outside and which is separated from the means of egress from the building or structure.

Containers

(11) A container for a combustible (other than a fuel), corrosive or toxic substance shall,

(a) be suitable for the particular substance; and

(b) be clearly labeled to identify,

(i) the substance,

(ii) the hazard involved in the use of the substance, and

(iii) the safeguards and protective measures to be taken by persons before, during and after using the substance.

Fuel
containers

(12) A container for a fuel shall be identified as to content.
New.

SANITATION

Drinking
water

578.—(1) An adequate supply of potable water shall be kept readily accessible for persons.

Idem

(2) The potable water shall be supplied from a piping system or from a clean, covered container having a drain faucet.

Drinking
cups

(3) No person shall be required to, or shall, use a dipper or drinking cup in common with another person.

- (4) Adequate flush toilets, chemical toilets or privies ^{Toilet facilities} shall be provided or made available for the use of persons from the start of the project,

- (a) within reasonably easy access of their place of work; and
- (b) so that there is at least one toilet or privy for every thirty or fewer persons on the project at any one time.

- (5) Every flush toilet, chemical toilet or privy shall, ^{Idem}

- (a) be constructed so that any user is sheltered from view and protected from the weather and from falling objects;
- (b) have natural or artificial illumination;
- (c) be provided with adequate supplies of toilet paper and disinfectant;
- (d) be maintained in a clean and sanitary condition;
- (e) be equipped with a toilet seat and cover; and
- (f) if portable, be equipped with a urinal trough in addition to the toilet or privy.

- (6) Washing facilities with adequate clean water, soap and individual towels or other drying equipment ^{Washing facilities} shall be provided for persons who use or handle corrosive, poisonous or other substances likely to endanger their safety. *New.*

FIRE PROTECTION

- 579.—(1) Fire extinguishing equipment shall be provided ^{Fire extinguishers} where risk of fire exists that is,

- (a) suitable as to type and size for combatting the likely fire;
- (b) protected from mechanical injury;
- (c) located for easy access at suitably marked stations;
- (d) maintained in good operating condition, and
- (e) protected from freezing.

Standpipes

- (2) Where a permanent standpipe is to be installed in a building, it shall,
 - (a) be installed progressively, so far as is practicable, as the building construction proceeds;
 - (b) be provided with a valve at each hose outlet;
 - (c) have a $1\frac{1}{2}$ -inch diameter hose, with a combination straight stream and fog nozzle, connected to the valve at each hose outlet and shall be installed in all storeys in such locations that each portion of the building is protected by means of hose not over seventy-five feet in length;
 - (d) where applicable, have a suitable connection for the municipal fire department located on the street side not more than three feet and not less than one foot above grade and clear and easy access to the connection shall be maintained at all times; and
 - (e) be provided with adequate water pressure.

Fire
extinguishers

- (3) A fire extinguisher shall,
 - (a) be recharged immediately after use and returned to its designated position;
 - (b) be inspected at least monthly and the date of the last inspection recorded on it; and
 - (c) not contain carbon tetrachloride, methyl bromide or other toxic vapourizing liquids.

Water-type
fire
extinguishers

- (4) At least one water-type fire extinguisher of a stored pressure, cartridge operated or pump tank type, having a capacity of two Imperial gallons, shall be provided,
 - (a) in every workshop;
 - (b) in every storage building for combustible materials;
 - (c) in places where welding or flame-cutting operations are carried on, while the operations are being carried on and for a reasonable time after their conclusion; and

- (d) on each storey having a floor space of 5,000 sq. ft. or less in an enclosed building being constructed or altered, and an additional fire extinguisher for each additional 5,000 sq. ft. of floor space in the storey or any fraction thereof.
- (5) Clause *d* of subsection 4 does not apply to a single storey building without a basement or cellar. Exception as to clause *d*
- (6) One or more dry chemical fire extinguishers, the contents of which are discharged under pressure and with a capacity of at least four pounds or other equally effective extinguishers shall be provided, Dry chemical fire extinguishers
- (a) where flammable liquids are stored or handled;
- (b) where oil-fired or gas-fired equipment is used; and
- (c) where a tar or asphalt kettle is used. *New.*

ELECTRICAL, WELDING, AND HAULAGE REQUIREMENTS DURING CONSTRUCTION

- 580.—(1) Electrical equipment and wiring methods used during the construction period shall comply with the electrical requirements of this Part. Electrical equipment
- (2) Where welding and burning is done during the construction period, the requirements of section 248 Welding and burning apply.
- (3) Where haulage equipment is used during the construction period, the requirements of sections 238 to 240 apply. *New.* Haulage

TEMPORARY HEAT

- 581 —(1) A fuel-fire heating device shall, Fuel-fired heating devices
- (a) be so located, protected and used that it will not risk the ignition of,
- (i) a tarpaulin or similar temporary enclosure, or
- (ii) adjacent wood or other combustible materials;

- (b) be used only in a confined or enclosed space where there is provided,
 - (i) an adequate supply of air for combustion, and
 - (ii) adequate general ventilation of the space;
- (c) be located so as to be protected from damage or overturning;
- (d) not be located in or adjacent to a means of egress; and
- (e) when used to burn a solid fuel, be connected by a securely supported sheet metal pipe to discharge properly the products of combustion outdoors.

Fuel supply
lines

- (2) Fuel supply lines shall be protected from damage.

Temporary
steam
piping

- (3) Temporary steam piping shall be,

- (a) installed properly and supported securely; and
- (b) insulated or protected by screens or guards where persons may accidentally come into contact with the piping. *New.*

CONSTRUCTION EQUIPMENT

Vehicles,
machinery,
tools, etc.

- 582.—(1) Vehicles, machinery, tools and equipment used on a project,

- (a) shall be in such condition that when used they will not endanger persons;
- (b) shall not be used while being repaired or serviced;
- (c) shall, when operated by motive power, have been inspected by an authorized person at least once in the twenty-four hours prior to their use;
- (d) shall, when applicable, have a safe means of access to the operator's station; and
- (e) shall have at least the same factor of safety as the original design for all modifications, extensions, replacement parts or repairs.

- (2) No person shall operate a motorized vehicle unless ^{Operators of motorized vehicles} he is authorized to do so.
- (3) Subsection 2 does not apply to a person, ^{Exception}
- (a) who is under instruction in the operation of the vehicle; and
 - (b) who is accompanied by a person who is authorized to operate a motorized vehicle.
- (4) No person shall be on a moving support, including a ^{Moving supports} platform, bucket, basket, load, hook or sling, supported by,
- (a) the boom of a crane or other similar hoisting machine; or
 - (b) a fork-lift truck, front-end loader or other similar machine.
- (5) Subsection 4 does not apply to, ^{Exception}
- (a) a bucket or basket attached to a hydraulic-powered machine on which the operating controls are on the bucket or basket and the machine is equipped with a fail-safe device which automatically locks the support in position; and
 - (b) the platform of an approved device for hoisting persons.
- (6) All hoisting hooks shall be equipped with a safety ^{Hoisting hooks} catch.
- (7) Subsection 6 does not apply to hoisting hooks while ^{Exception} being used in the placing of structural members when the method of placing is such that persons are as safe as if a safety catch were installed.
- (8) Friction-type clamps used in hoisting materials shall ^{Friction-type clamps} be so constructed that the accidental slackening of the hoisting cable does not release the clamp.
- (9) Where hoisting is done by a device in which the ^{Balloons, etc.} weight of the load is not transferred to ground support at all times, such as by a balloon or helicopter, written permission shall be obtained from an engineer prior to hoisting.

Cranes

(10) A crane shall be equipped with a boom,

- (a) authorized by the manufacturer; or
- (b) designed by a professional engineer and fabricated in accordance with the requirements of his design.

Load-rating plates

(11) Manufacturers' load-rating plates shall be attached to all cranes in clear view of the operator and shall contain sufficient information to enable the operator to determine the safe load which can be hoisted by the crane under any conditions.

Idem

(12) Where the boom of a crane is other than that authorized by the manufacturer, the load-rating plate shall be in accordance with information supplied by a professional engineer.

Guide ropes

(13) Where a person may be endangered by the rotation or uncontrolled motion of a load being hoisted by a crane or similar machine, one or more guide ropes or tag lines shall be used to prevent the rotation or other uncontrolled motion.

Where signalmen required

(14) When the operator of a crane, shovel or similar machine has his view of the path of travel of any part of the machine or its load obstructed, one or more competent signalmen shall assist him by keeping the part of the machine or its load under observation and communicating with the operator by adequate visual signals, or where this is impracticable, by a suitable telecommunication system.

Repairs to pipeline

(15) While a section of a pipeline or hose is under pressure, no person shall commence to disconnect or carry out any repairs on that section.

Pile drivers supply hoses

(16) A hose supplying steam or air to the hammer of a pile driver shall have attached to it a wire rope or chain to prevent the hose from whipping if the hose becomes separated from the hammer.

Lifting jacks

(17) Every lifting jack shall,

- (a) have its rated capacity legibly cast or stamped in plain view on the jack; and
- (b) be equipped with a positive stop to prevent over-travel or with an indicator where a positive stop is impracticable.

- (18) During the hoisting, placing, removal or with-^{Piles}drawal of piles or sheet-piling, they shall be adequately supported at all times and all persons not actually engaged in the operation shall be kept from the area.
- (19) No internal combustion engine shall be operated, ^{Internal combustion engines}
- (a) in an excavation unless adequate provision is made to ensure that exhaust gases and fumes will not accumulate in the excavation; or
 - (b) in an enclosed building or other enclosed structure unless,
 - (i) the exhaust gases and fumes are discharged directly to outdoors to a point sufficiently remote to prevent their return, or
 - (ii) there is an adequate supply of air for combustion and adequate mechanical exhaust ventilation. *New.*

SPECIAL PROVISIONS

- 583.—(1) Where the walls of an excavation for a well are ^{Excavations for wells} not supported as prescribed by subsection 3 of section 573, no person shall enter or remain in the excavation if it is over four feet in depth, unless,
- (a) a steel liner of adequate strength has been installed which,
 - (i) extends two feet above ground level and to within four feet of the point where the work is being done,
 - (ii) is adequately supported on two sides by steel wire rope, and
 - (iii) is such that the difference between the diameter of the excavation and the diameter of the liner does not exceed four inches; and
 - (b) the person,
 - (i) works from within the steel liner,

(ii) is wearing a safety harness the rope of which is secured at the surface, and

(iii) is attended by another person who is stationed outside the excavation.

Confined spaces

(2) No person shall enter a confined space where the means of egress is restricted, unless,

(a) the space has been tested to ascertain if a hazard exists;

(b) adequate precautions as prescribed by these requirements have been taken against any hazard found to exist;

(c) he is attended by another person stationed outside the confined space; and

(d) suitable arrangements have been made to remove the person from the confined space if he requires assistance, and where practicable, these arrangements shall include his use of a safety harness or safety belt.

Rock drilling operations

(3) During rock drilling operations, an adequate supply of water shall be provided where necessary to control the dissemination of dust into the breathing zone of persons in the area who are not protected as required by subsection 3 of section 572.

Explosives

(4) Where explosives are used on a project, sections 279 to 310 apply. *New.*

RUNWAYS, RAMPS, PLATFORMS

Runways etc.

584.—(1) A runway, ramp or platform, other than a scaffold platform shall be,

(a) designed, constructed and maintained to safely support all loads that may reasonably be expected to be applied to it;

(b) nineteen inches or more in width; and

(c) securely fastened in place.

Ramps

(2) A ramp shall have,

(a) a slope not exceeding one foot of vertical rise to each three feet of horizontal run; and

- (b) cross cleats if the slope exceeds one foot of vertical rise to each eight feet of horizontal run, and the cleats shall be,
 - (i) spaced at regular intervals not exceeding eighteen inches, and
 - (ii) of equivalent strength and have equivalent resistance to slipping as one inch by two inch dressed boards securely nailed to the ramp.
- (3) Subsection 2 does not apply to a ramp installed in the stairwell of a building not exceeding two storeys in height, but every such ramp shall have, Exception
 - (a) a slope not exceeding one foot of vertical rise to one foot of horizontal run; and
 - (b) cross cleats,
 - (i) spaced at regular intervals not exceeding twelve inches, and
 - (ii) of equivalent strength and have equivalent resistance to slipping as two inch by two inch dressed boards securely nailed to the ramp. *New.*

LADDERS

585.—(1) A ladder shall,

Ladders

- (a) be designed, constructed, maintained and used so as not to endanger the safety of any person;
- (b) be used only in such a way that the loads applied do not cause the materials used in any part of the ladder to be stressed beyond the allowable unit stresses for the materials used;
- (c) be free from broken or loose members or other faults;
- (d) have rungs evenly spaced twelve inches on centres;
- (e) have side rails not less than twelve inches apart;

- (f) be placed on a firm footing;
- (g) be held in place by one or more persons while being used, if it exceeds thirty feet in length and is not securely fastened;
- (h) when not securely fastened, be placed so that the base of the ladder is not less than one quarter and not more than one third of the length of the ladder from a point directly below the top of the ladder and at the same level as the base of the ladder;
- (i) if used as a regular means of access between floors,
 - (i) be securely fastened in place,
 - (ii) extend at least three feet above every landing or floor,
 - (iii) have a clear space of four inches behind any rung, and
 - (iv) be so located that an adequate landing surface, clear of obstructions, is available at the top and bottom of the ladder;
- (j) not be in an elevator shaft or hoistway when such space is being used for hoisting; and
- (k) not be lashed to another ladder to increase its length.

Wooden
ladders

(2) A wooden ladder shall,

- (a) consist of wood that is straight-grained and free from loose knots, sharp edges, splinters and shakes;
- (b) not be painted or coated with an opaque material; and
- (c) have rungs of clear straight-grained material that is free of knots.

Wooden
cleat-type
ladders

(3) A wooden ladder of the cleat type shall have,

- (a) side rails,

- (i) not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches for ladders up to and including nineteen feet long, and
- (ii) not less than $1\frac{5}{8}$ inches by $5\frac{5}{8}$ inches for ladders over nineteen feet long; and

(b) cleats or rungs,

- (i) not less than five eighths of an inch by $2\frac{5}{8}$ inches, and
- (ii) braced by filler blocks between the cleats or rungs.

(4) A double width ladder shall,

Double
width
ladders

- (a) have three rails evenly spaced;
- (b) be not less than five feet in width;
- (c) have cleats or rungs that extend the full width of the ladder; and
- (d) be securely fastened in place.

(5) The maximum length of a ladder measured along the side rail shall be,

Maximum
lengths of
ladders

- (a) 16 feet for a trestle ladder, a base section of an extension trestle ladder, or an extension section of an extension trestle ladder;
- (b) 20 feet for a step ladder;
- (c) 30 feet for a single ladder or individual section of a ladder;
- (d) 48 feet for a two-section extension ladder; and
- (e) 66 feet for an extension ladder having more than two sections.

(6) Runs of ladders shall,

Runs of
ladders

- (a) have rest platforms at intervals not greater than thirty-five feet; and
- (b) be offset at every rest platform to provide overhead protection.

- | | |
|--|---|
| Exception | (7) Subsection 6 does not apply to a permanently installed ladder which is provided with a safety cage over its entire length. |
| When ladder used as a self-supporting unit | <p>(8) When a step-ladder is being used as a self-supporting unit,</p> <ul style="list-style-type: none"> (a) the legs shall be fully spread and the spreader shall be locked; (b) the top of the step-ladder shall not be used as a step; (c) the pail shelf shall not be used as a step. |

STAIRS

- | | |
|-------------------------------|--|
| Temporary stairs and landings | (9) Temporary stairs and landings shall be designed and constructed to safely support a live load of 100 pounds per square foot. |
| Requirements for stairs | <p>(10) Stairs shall,</p> <ul style="list-style-type: none"> (a) have treads and risers uniform in width, length and height in any one flight; (b) have stringers making an angle not exceeding fifty degrees from the horizontal; (c) have a vertical distance between landings not exceeding twelve feet; and (d) have a handrail equivalent to the top-rail of a guardrail as prescribed in these requirements securely fastened and supported in place on the open side or sides of each flight and at each landing. |
| Temporary stairs | (11) Temporary stairs shall have a clear width of not less than thirty inches. |
| Skeleton steel stairs | <p>(12) Skeleton steel stairs shall have temporary wooden treads,</p> <ul style="list-style-type: none"> (a) of suitable planking extending the full width and breadth of the stairs and landings; and (b) securely fastened in place. |

- (13) Clause *b* of subsection 10 and subsection 11 do not ^{Exception} apply to a prefabricated stair erected inside a tower formed by scaffold frame sections where,

- (a) the stringers make an angle not exceeding sixty degrees from the horizontal; and
- (b) the stairs have a clear width of twenty inches.
New.

GUARDRAILS

- 586.—(1) A guardrail shall be provided and maintained ^{Where guardrails required} in good condition,

- (a) around any uncovered opening in a floor, roof or other surface; and
 - (b) at the perimeter or any other open side of,
 - (i) a floor, including a mezzanine and a balcony,
 - (ii) a surface of a bridge,
 - (iii) a scaffold, including a platform, runway or ramp, or
 - (iv) a concrete roof, while the formwork remains in place,
- from which a person may fall,
- (v) into water,
 - (vi) for a vertical distance of four feet or more where the scaffold referred to in subclause iii of clause *b* is used for wheelbarrows or other vehicles, or
 - (vii) for a vertical distance of ten feet or more.

- (2) A guardrail shall have a height of not less than thirty-six inches and not more than forty-two inches ^{Requirements for guardrails, height} above the surface, floor, scaffold or concrete roof on which it is installed.

- (3) A guardrail shall be constructed in accordance with ^{Idem specifications} one of the following specifications:

1. A wooden guardrail, free from splinters and protruding nails, consisting of,
 - i. a top rail not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, securely supported on posts not less than $1\frac{5}{8}$ inches by $3\frac{5}{8}$ inches in cross-section, spaced at intervals of not more than eight feet,
 - ii. an intermediate rail not less than three inches wide, securely fastened to the inner side of the post midway between the top rail and the toe-board, and
 - iii. a toe-board securely fastened to the posts or other vertical supports, and extending from the surface, floor, scaffold or roof, to a height of not less than five inches;
2. A wire cable guardrail maintained taut by means of a turnbuckle consisting of,
 - i. a top-rail and an intermediate rail of not less than one-half of an inch diameter wire cable with vertical separators at least two inches wide, spaced at intervals of not more than eight feet, and
 - ii. a toe-board securely fastened to the inner side of the vertical separators and extending from the surface, floor, scaffold or roof to a height of not less than five inches; or
3. Notwithstanding the height limitations of subsection 2, a guardrail of fencing material, commonly referred to as snow fencing, adequately supported in a vertical position and maintained taut, which shall have,
 - i. vertical pieces of lumber four feet long, not less than one and one-half inches wide and three-eighths of an inch thick, painted a distinctive colour, and woven between five double strands of number thirteen Imperial Standard Gauge steel wire so that the lumber shall be tight

between the wire and space at not more than three and one half inches centre to centre, and

- ii. the double stranded wires shall be wrapped round each other at least three times in each space between the lumber and shall be evenly spaced ten inches apart.

- (4) A guardrail shall be constructed in accordance with paragraph 1 of subsection 3 if the district mining engineer is of the opinion that the wire cable guard-rail or fencing material is not installed or is not being maintained in good condition. *New.* Guardrails

SCAFFOLDS

- 587.—(1) Where work cannot be done safely on or from the ground or from a building or other permanent structure, a scaffold constructed as prescribed in this section, or some other equally safe means of support for persons, shall be provided. Where
scaffolds
required
- (2) No person shall use stilts, a barrel, box or other loose object, Use of
loose
objects
prohibited
 - (a) to stand upon while working; or
 - (b) to support a scaffold or working platform.
 - (3) The erection, use, dismantling or removal of a scaffold shall be done under the supervision of a person experienced in this work. Supervision
required
 - (4) During the erection, alteration or dismantling of a scaffold or scaffold platform, work, other than that required for the erection, alteration or dismantling, Carrying on
of work
 - (a) shall be done only from the parts of the scaffold or scaffold platform which comply with subsection 1 of section 586 and subsection 5 of this section; and
 - (b) shall not be performed beneath the part being erected, altered or dismantled unless adequate overhead protection is provided.
 - (5) A scaffold shall, Require-
ments for
scaffolds
 - (a) be capable of supporting two or more times the maximum loading to which it may be

subjected without exceeding the allowable unit stresses for the materials used and where the principal component of the scaffold is a tubular metal frame;

- (b) be constructed only of suitable structural material and where lumber is used, it shall be No. 1 Construction Grade Eastern Spruce or better;
- (c) have all uprights diagonally and horizontally braced to prevent lateral movement;
- (d) have no splices between the points of support of horizontal members;
- (e) have footings, sills or supports which shall be sound, rigid, and capable of supporting the maximum load without unsafe settlement or deformation;
- (f) have all necessary fittings and gear, which shall be suitable and properly installed;
- (g) have safety catches on all hooks; and
- (h) be adequately secured to prevent lateral movement at vertical intervals not exceeding three times the least lateral dimension of the scaffold measured at the base.

Require-
ments for
scaffold
platforms

(6) A scaffold platform shall,

- (a) be designed, constructed and maintained to safely support all loads to be applied to it in accordance with clause *a* of subsection 5;
- (b) be at least nineteen inches wide;
- (c) when ten or more feet above a floor, roof or other surface, consist of planks tightly laid for the full width of the scaffold; and
- (d) when lumber is used, have planks which,
 - (i) are of No. 1 Construction Grade Eastern Spruce or better,
 - (ii) are at least two inches thick and ten inches wide,

- (iii) overhang its end supports by not less than six inches and not more than eighteen inches, and
- (iv) are cleated or otherwise secured against slipping.

(7) A suspended scaffold shall,

Require-
ments for
suspended
scaffolds

- (a) be attached to a fixed support or an out-rigger beam capable of supporting four or more times the maximum loading to which it may be subjected, without overturning and without exceeding the allowable unit stresses for the materials used;
- (b) have hangers located not less than six inches and not more than eighteen inches from the ends of the platform;
- (c) when capable of moving either vertically or horizontally,
 - (i) have rope falls equipped with suitable pulley blocks, or
 - (ii) have a mechanical hoisting device equipped with a positive locking device to prevent the scaffold from falling freely;
- (d) not use fibre rope where,
 - (i) the distance between blocks exceeds three hundred feet,
 - (ii) any corrosive substance is in the vicinity of the rope, or
 - (iii) any mechanical grinding or flame cutting equipment is to be used in the vicinity of the rope;
- (e) when not being raised or lowered, where practicable, be secured to and firmly anchored to the building or structure; and
- (f) have wire mesh of at least No. 16 gauge rejecting a ball one and a half inches in diameter, extending from the toe-board to the rail of the guardrail and fastened securely in place.

Boatswain's
chair

(8) A boatswain's chair shall,

- (a) be not less than two feet long and ten inches wide;
- (b) be supported by a sling which shall be at least three-eighths of an inch wire rope, if the workman on the chair is using,
 - (i) any corrosive substance, or
 - (ii) any mechanical grinding or flame cutting equipment; and
- (c) not be required to comply with clauses *b* and *f* of subsection 7.

Safety
belts

- (9) Each person on a suspended scaffold shall use a safety belt attached in a satisfactory manner to a separate independently suspended life-line of at least five-eighths of an inch manila rope securely attached overhead to the project or other suitable support in such a way that, failure of the scaffold support does not cause failure of the life-line support, the life-line is free from danger of chafing on any sharp edge, and if the person should fall, he will be suspended at a distance of not more than five feet from the place where he was working.

Exception

- (10) Subsection 9 does not apply to a part of a suspended scaffold which is designed, constructed and maintained in such a way that the failure of one support or one suspension will not cause the collapse of the part of the scaffold directly or by progressive collapse of the other supports or suspensions.

Outrigger
scaffolds

- (11) An outrigger scaffold shall have,

- (a) the platform commencing within three inches of the wall; and
- (b) outrigger beams which are well secured against horizontal and vertical movement.

Ladder jack
scaffolds

- (12) A ladder jack scaffold shall,

- (a) have ladder jacks that transmit their load directly to the ladder side rails;
- (b) not be used to provide a working platform more than ten feet above a floor, roof or any other surface supporting the ladders; and

- (c) not be used where the distance between the ladders exceeds ten feet.
- (13) A mobile scaffold mounted on casters or wheels shall, ^{Mobile scaffolds}
 - (a) where the height of the scaffold exceeds three times its least lateral dimension measured at the base, be equipped with outriggers, guy wires or other positive means to prevent over-turning;
 - (b) be equipped with a suitable braking device on each wheel;
 - (c) have the brakes applied when any person is on the scaffold or scaffold platform; and
 - (d) not be moved when a person is on the scaffold or scaffold platform except when every person on the scaffold is using a safety belt in a similar manner to that prescribed in subsection 9 for a person on a suspended scaffold.

FORMWORK AND FALSEWORK

- 588.—(1) Every structure and every part of a structure ^{Concrete forms, etc., when adequate} for the purpose of forming concrete shall be designed, constructed, supported and braced to safely withstand all loads likely to be applied to it before, during and after the placing of concrete.
- (2) Where shores are used, ^{Where shores used}
 - (a) the bracing required by subsection 1 shall include sufficient bracing in the vertical and horizontal planes to prevent lateral movement of the formwork and buckling of the shores; and
 - (b) footings for shores shall be sound, rigid and capable of carrying the maximum load without excessive settlement or deformation.
 - (3) Where shoring is more than one tier in height, the ^{Shoring in tiers} junction of each tier shall be braced to prevent any lateral movement.

Idem

- (4) Without limiting the generality of subsection 1, where falsework consists of shoring more than one tier in height or is a framed structure,
- (a) such falsework shall be designed by a professional engineer to safely withstand the loads mentioned in subsection 1;
 - (b) the drawings of such falsework shall be prepared and shall,
 - (i) show the size and specifications of the falsework, including the type and grade of all materials for its construction,
 - (ii) bear the seal or signature of the professional engineer, and
 - (iii) be kept at the project at all times while the falsework is being constructed or used; and
 - (c) such falsework shall be constructed in accordance with the drawings prescribed in clause *b* and any revisions shall be countersigned by the professional engineer mentioned in clause *a*.

Removal
of forms

- (5) Removal of falsework and formwork shall not be commenced until the concrete has attained sufficient strength to be,
- (a) self-supporting, or
 - (b) capable of being adequately supported by reshoring. *New.*

DEMOLITION

Precautions
to be taken

589.—(1) No person shall commence or continue to demolish, dismantle or move a building or other structure until such times as,

- (a) he has taken steps to prevent injury to any person in or near the project or the adjoining property; and

- (b) all existing gas, electrical and other services that are likely to endanger the safety of persons having access to the building or other structure have been properly shut off and disconnected.
- (2) No person shall stand on top of a wall, pier or chimney to remove material therefrom, unless safe flooring or adequate scaffolding or staging is provided on all sides not more than ten feet below his place of working. Standing on walls, etc., prohibited
 - (3) Scaffolding shall be made self-supporting to be independent of that portion of the project being demolished. Requirement as to scaffolding
 - (4) This section applies to demolition by, Application of section
 - (a) a heavy weight suspended by cable from a crane or other hoist machine;
 - (b) a power shovel, bulldozer or other vehicle;
 - (c) any other powered mechanical device;
 - (d) explosives; or
 - (e) any combination of the foregoing.
 - (5) The person in charge of demolition shall ensure that no person except his employees directly engaged on the demolition described in subsection 4, enters a demolition zone, Duty of person in charge
 - (a) having its centre at the point of demolition; and
 - (b) having a horizontal radius equal to one and a half times the height of the project, or portion of the project being demolished.
 - (6) The controls of a mechanical device for demolishing a project shall be operated from a safe location which shall be as remote as is practicable from the demolishing operation. Controls of mechanical devices

- | | |
|--------------------------------------|---|
| Swinging weights | (7) Where a swinging weight is used for demolishing, the supporting cable shall be of such length or so restrained that the weight will not swing against any structure other than the structure being demolished. |
| Glass | (8) Before demolition commences, glass shall be removed from windows and other locations on the project or otherwise protected so that there is no possibility of breakage of the glass at any stage of the demolition. |
| Method of working | (9) Demolition shall proceed systematically from the highest to the lowest point of the project. |
| Idem | (10) In a skeleton structural frame building, the skeleton structural frame may be left in place during the demolition or dismantling of the masonry if the masonry and any loose material is removed from the skeleton structural frame in the order prescribed in subsection 9. |
| Idem | (11) The work above each tier or floor shall be completed before the safety of its supports is impaired by the demolition or dismantling operations. |
| Where work suspended or discontinued | (12) Where work on a building or structure being demolished or dismantled is suspended or discontinued prior to the completion of the demolition or dismantling, access to the part which has still to be demolished or dismantled shall be prevented by the installation of fencing or other equally effective barriers. |
| Girders | (13) A truss, girder or other structural member shall not be disconnected until it has been relieved of all loads except its own weight and has been temporarily supported. |
| Masonry walls | (14) Masonry walls shall be removed in reasonably level courses. |
| Falling materials | (15) Materials shall not be loosened or permitted to fall in such masses as to endanger the structural stability of a floor or other support of the project or of any scaffold. |

- (16) A basement, cellar or excavation on a project being demolished or dismantled shall be backfilled to grade ^{Basements to be backfilled} upon completion of the demolition or dismantling unless the open edges of the basement, cellar or excavation are protected by adequate fencing.
- (17) Subsection 16 does not apply to a basement or cellar which has a roof, floor or other solid covering over it and all openings are boarded up to prevent access to the basement or cellar. *New.* ^{Exception}

EXPLOSIVE ACTUATED FASTENING TOOLS

- 590.—(1) An explosive actuated fastening tool shall, ^{Fastening tools}
- (a) be operated only by an authorized person who has been duly instructed in the use of the equipment according to the manufacturer's specifications and recommendations;
 - (b) be operated only in accordance with the manufacturer's approved recommendations;
 - (c) be inspected by the operator before use to ensure that it is clean and in all ways suitable for use;
 - (d) not be left unattended in a place where it might be available to an unauthorized person;
 - (e) be stored in a locked container.

- (2) Explosive loads shall, ^{Explosive loads}
- (a) be suitably identified;
 - (b) be stored in separate compartments if of varied strength;
 - (c) be stored in a locked container; and
 - (d) not be left unattended in a place where they may be available to unauthorized persons. *New.*

CONSTRUCTION HOISTS

Interpre-
tation

591.—(1) In this section and in sections 592 to 596,

- (a) “attendant” means a person who is stationed on the conveyance or at its landing places and has control of any movement of the conveyance of the hoist as whole or part of his duties;
- (b) “chimney hoist” means a hoist used for hoisting or lowering persons or materials in or without a chimney;
- (c) “concrete bucket hoist” means a construction hoist used for hoisting or lowering concrete only;
- (d) “construction hoist” means a mechanism for use in connection with the construction, maintenance or demolition of a building, structure or other work on surface of a mining property,
 - (i) for hoisting or lowering materials or persons or both, and
 - (ii) equipped with a conveyance that moves in guides during its vertical movement, and includes its hoistway and hoistway enclosure;
- (e) “materials hoist” means a construction hoist used for hoisting or lowering materials only;
- (f) “operator” means a person who is stationed at the driving unit of a construction hoist and has direct control of any movement of the conveyance of the hoist as the whole or part of his duties;
- (g) “permit” means a permit granted under this section to operate a construction hoist under specific loadings;
- (h) “user” means the person in charge of a construction hoist as owner, lessee or otherwise, but does not include an operator or attendant as such;

- (i) "workmen's hoist" means a construction hoist used for hoisting or lowering persons or materials.
- (2) The specifications for a construction hoist and its equipment, and the general arrangement of the installation including location, tower and hoistway, shall be submitted to the chief engineer for approval and no installation shall be made until such approval has been received. ^{Specifications of approved}
- (3) The second or any subsequent installation on the same property of a construction hoist and hoistway, originally approved by the chief engineer, may be made on the approval of the district electrical-mechanical engineer, without the submission of plans and specifications, after he has inspected the site. ^{Specifications of subsequent installations}
- (4) Every construction hoist shall have tests conducted to prove the safe operation of all brakes, clutches, safety devices and controls, before being put into operation at a new location and thereafter, at such intervals as to ensure safe operation. ^{Tests}
- (5) The results of such tests shall be recorded in the Machinery Record Book and made available to the district electrical-mechanical engineer. ^{Idem}
- (6) No construction hoist shall be put into operation until a permit showing the maximum allowable loadings for persons or materials has been obtained from the district mining engineer, and such permit shall be displayed in a conspicuous place in the hoisting area. ^{Maximum load permits}
- (7) Where the permit for a construction hoist does not designate the capacity in terms of persons, or persons and pounds, the user of the hoist shall furnish and display a notice, in the conveyance or other load carrying unit of the hoist, setting forth in letters not less than two inches high the words "No person shall ride in or on this conveyance". ^{Notice}
- (8) The prohibition contained in the notice mentioned in subsection 7 applies to every person except a person engaged in the lubrication, repair, erection, dismantling or maintenance of a construction hoist. ^{Idem}

Where
operator
and
attendant
required

- (9) Where a construction hoist has a driving unit that is not directly controlled by a device installed in the conveyance or at each landing of the hoistway, there shall be,

(a) an operator at all times; and

(b) an attendant in the conveyance or at each landing of the hoistway when persons are being conveyed.

Operators
must be
qualified

- (10) Where an operator is required for the operation of a construction hoist, he shall, if required, possess a certificate of qualification.

Attendants
must be
experienced

- (11) Where an attendant is necessary for the operation of a construction hoist, the attendant shall have attained the age of eighteen years and shall have had adequate training and experience to perform his duties safely.

Safety of
persons

- (12) Every construction hoist and all equipment used in connection therewith shall be so designed, installed and maintained that the safety of persons being carried or being near shall be ensured at all times.

Load
capacity
certificate

- (13) The owner or user of a construction hoist shall provide a certificate from the manufacturer or an independent person approved by the chief engineer showing the maximum allowable weight that the hoist is capable of handling.

Protection
of hoist
operators
and hoists

- (14) The operator of a construction hoist and the hoist shall be adequately protected against falling objects and other hazards consistent with the project.

Idem

- (15) The installation shall be so arranged that the hoist operator will have the maximum practicable view of the tower.

Idem

- (16) The building housing the hoist shall be adequately lighted.

Idem

- (17) The machine area, tower landings and pit shall be kept free of building materials, debris, and equipment not required for the hoist.

Idem

- (18) Flammable fuels, oil or other readily combustible materials shall be stored away from the hoist area.

- (19) The main overhead beams at the top of the tower and the immediate members supporting the beams shall, Main
overhead
beams of
hoist towers

- (a) be of steel; and
- (b) safely support the loads likely to be imposed thereon, including,
 - (i) twice the maximum load on the ropes suspended from the overhead beams, and
 - (ii) the weight of the overhead beams and machinery thereon, and
 - (iii) be rigidly and safely supported at each end.

- (20) A construction hoist tower shall, Hoist
towers

- (a) be of steel;
- (b) safely support the loads likely to be imposed upon it, including,
 - (i) twice the maximum static load suspended from the overhead beams,
 - (ii) any loads due to a hoist boom or concrete bucket chute,
 - (iii) the weight of the tower, and
 - (iv) loads due to wind and ice;
- (c) be supported upon a safe, firm, level foundation such that the tower will remain in vertical alignment and the bearing capacity of the soil will not be exceeded by the maximum load from the tower, the hoist and its load;
- (d) extend above the top landing so that, when the conveyance is at the top landing, ten feet of overhead clearance will be provided from the topmost part of the conveyance to the lowest part of the tower or machinery over the hoistway;
- (e) not be located wholly or partially in front of an entrance to a building;

(f) be plumb;

(g) be securely braced or guyed to the building or to other adequate anchorage at vertical spacings of not over forty feet; and

(h) have each guy wire of steel, a quarter of an inch or larger in diameter, securely attached at each end with rope clips, and with a turn-buckle to adjust its length.

Foundations

(21) Where part of a building or structure is used for a hoist foundation, it shall be constructed or reinforced to withstand any load that is likely to be placed upon it, and any space beneath a hoist foundation shall be enclosed to prevent any person from entering therein.

Access to sheaves

(22) Safe means of access to the overhead sheaves shall be provided by a ladder from the highest landing of the tower.

Assembling steel

(23) In the assembling of the segments of steel hoist towers, connections shall be made with bolts, pins or special devices to prevent the connections from accidentally disengaging.

Counterweight runways

(24) Where the counterweight runway is located within 36 inches of the building floor or landing, the entire length of the runway adjacent to the building shall be screened with wire mesh (16 gauge) that will reject a ball one and one half inches in diameter.

Counterweight guards

(25) Counterweight guards shall consist of a metal frame and No. 16 gauge sheet steel, or plywood three-quarters inch thick, properly reinforced and braced, and securely fastened in position.

Idem

(26) Guards shall be installed on all counterweight runways in the open side or sides at grade or working levels and extend to a height of at least eight feet above that level. *New.*

Hoistways

592.—(1) The hoistway of a construction hoist shall be enclosed,

(a) on sides not facing conveyance entrances at the lowest landing to a height of at least six feet; and

(b) on sides facing conveyance entrances, from the top of each landing opening to the under-

side of the next landing above or to the top of the hoistway, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter and the mesh shall be securely fastened to the tower.

- (2) The enclosure described in clause *b* of subsection 1 ^{Where enclosure not required} may be omitted where the conveyance is equipped on its entrance sides with a door of the vertically sliding or horizontal-swinging type,
 - (a) extending from within two inches of the conveyance floor to a height of not less than five feet;
 - (b) consisting of a metal frame and No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter; and
 - (c) equipped with a positive locking device.
- (3) A hoistway within a building shall be fully enclosed, ^{Wire mesh} except at landing entrances, with No. 16 gauge wire mesh rejecting a ball one and a half inches in diameter or with substantial building materials having equivalent strength and openings.
- (4) The hoistway pit shall be deep enough to allow ^{Pits} the conveyance platform or bucket to descend to the proper level required for smooth loading and unloading at the lowest landing.
- (5) A substantial gate shall be provided at each entrance ^{Requirements for hoistway gates} to the hoistway of a construction hoist and shall,
 - (a) extend from within two inches of floor level to a height of six feet;
 - (b) be of the vertically-lifting or horizontally-sliding type, or one-section horizontally-swinging type;
 - (c) not be of the vertically-collapsible type;
 - (d) reject a ball one and a half inches in diameter;
 - (e) be located between two and four inches of the landing platform; and
 - (f) provide minimum headroom clearance of six feet six inches when in the open position.

- | | |
|------------------------|---|
| Counter-weights | (6) A counterweight for a gate shall be so enclosed that it will be retained if its means of suspension fails. |
| Latches | (7) Each gate shall be equipped with a mechanical latch to keep the gate in the closed position. |
| Contact light switches | (8) Each landing gate shall be equipped with an electric contact switch that will turn on a light to indicate to the hoist operator when the gate is fully closed. |
| Landing platforms | <p>(9) A substantial landing platform shall be provided at each entrance to the hoistway of a construction hoist and shall,</p> <ul style="list-style-type: none"> (a) be securely fastened and safely supported at each end; and (b) be at least equal in width to the hoistway entrance and have, except at the lowest landing, for at least five feet to each side, a guard railing forty-two inches in height and a toe-board five inches in height, with the space between the railing and the toe-board filled in completely and securely with No. 16 gauge wire mesh that rejects a ball one and a half inches in diameter or equal enclosure. <i>New.</i> |
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- | | |
|-------------|--|
| Conveyances | <p>593.—(1) The conveyance of a construction hoist shall,</p> <ul style="list-style-type: none"> (a) be designed using a factor of safety of not less than five, based upon static loads and ultimate stresses of the materials; (b) adequately support fifty or more pounds per square foot of conveyance floor area; (c) operate in steel guides that will adequately withstand, without permanent deformation or damage, the application of the safety devices; (d) be equipped with approved guide shoes or rollers adjusted to provide only the necessary running clearance between the shoes and the guide rails; (e) be equipped with a safety device that will stop and sustain the conveyance when loaded to its maximum capacity should the means of suspension fail; |
|-------------|--|

- (f) be located so that the clearance between the conveyance platform and the landing sill is not less than three-quarters of an inch and not more than two inches;
 - (g) be enclosed on each non-entrance side with a toe-board five inches in height and with No. 16 gauge wire mesh extending at least six feet in height above the conveyance floor and rejecting a ball one and a half inches in diameter or shall be enclosed with solid material of adequate strength;
 - (h) have an adequate hood, part of which may be hinged, composed of No. 10 gauge wire mesh rejecting a ball one and a half inches in diameter or composed of solid material of equivalent strength;
 - (i) be equipped with a door or doors at least five feet in height above the conveyance floor, when used for the handling of persons, and so arranged that the doors can not open outward;
 - (j) be equipped when conveying persons with safety devices activated by governors arranged to trip at 25 per cent above normal operating speed.
- (2) Where a wheelbarrow or other rolling equipment is to be transported, restraining cleats or blocks shall be provided on the conveyance platform. ^{Cleats and blocks}
- (3) All counterweights shall have their sections strongly bolted together, shall be so placed that they cannot fall on any part of the machinery and shall be suspended in guides in such a manner that they will run freely. ^{Counter-weights} *New.*
- 594.—(1) The hoisting rope or ropes of a construction hoist shall, ^{Hoist ropes}
- (a) safely support the maximum static load to be imposed upon it without exceeding the ultimate breaking strength of the rope divided by the factor of safety for a construction hoist rope as set forth in the table in clause *k*;
 - (b) be not less than one half inch in diameter and composed of not less than six strands each of nineteen steel wires;

- (c) where used on a drum hoist have at least three complete turns of rope on the drum when the conveyance is at its lowest point of travel;
- (d) be examined daily for kinks, broken wires or other physical defects;
- (e) be properly dressed and maintained in a safe working condition;
- (f) be protected from falling material and rope-ways shall be maintained free of all material;
- (g) not cross over or under ropes from other hoists;
- (h) not be spliced;
- (i) not encircle or be supported or guided by a sheave or drum whose diameter is less than twenty-four times the diameter of the rope in use;
- (j) be securely anchored at each end by approved means;
- (k) provide a factor of safety, when considering the static loadings involved, not less than required in the following table:

TABLE
Minimum Factors of Safety for Hoisting Ropes

Rope Speed (Feet per Minute)	Minimum Factor of Safety		Rope Speed (Feet per Minute)	Minimum Factor of Safety	
	Workmen's Hoist	Materials Hoist		Workmen's Hoist	Materials Hoist
50	7.60	6.65	300	9.20	8.20
75	7.75	6.85	350	9.50	8.45
100	7.95	7.00	400	9.75	8.70
125	8.10	7.15	450	10.00	8.90
150	8.25	7.30	500	10.25	9.15
175	8.40	7.45	550	10.45	9.30
200	8.60	7.65	600	10.70	9.50
225	8.75	7.75	650	10.85	9.65
250	8.90	7.90	700	11.00	9.80

- (2) Where practicable, travelways and walkways shall ^{Travelways} be routed clear of ropes and the hoistman's view of the hoistway, but in any event, a safe travelway shall be provided.
- (3) No used rope shall be installed anew or used on a ^{Used ropes} newly installed hoist until its condition has been proven satisfactory by examination, electro-magnetic test, laboratory test or combination of these tests as required by the district electrical-mechanical engineer.
- (4) No rope shall be used where more than 5 per cent ^{Broken wires in ropes} of the total number of wires in any one lay of the rope are broken, or where visual inspection shows evidence of severe wear, corrosion, kink, or other possible cause of rope failure. *New.*
- 595.—(1) Electrical or mechanical means of signalling the ^{Signals} operator of a construction hoist shall be provided at each landing,
- (a) where the travel of the conveyance is more than thirty-five feet; or
- (b) where the hoist operator does not have a clear view of the landing.
- (2) The following code shall be used to give signals to ^{Code} a hoist operator:
- 1 signal—Stop immediately if in motion.
- 1 signal—Hoist.
- 2 signals—Lower.
- *3 signals—Persons will be on conveyance, operate carefully.
- *(This signal to be given before persons enter the conveyance).
- (3) Where the operator does not have a clear view of all ^{Voice communication} the hoistway landings, the operator shall have voice communication with each landing, but movement of the conveyance shall be made upon signal only.
- (4) The voltage of the signal system shall not exceed ^{Voltage} 30 volts. *New.*

SPECIFICATIONS

Specifications

596.—(1) Every construction hoist shall be,

- (a) equipped with a permanent tag or nameplate showing the horse power of the driving unit;
- (b) securely fastened to its foundation;
- (c) equipped with a brake or brakes that will stop and hold the conveyance when 150 per cent loaded, at every position in the hoistway;
- (d) if electrically driven, so arranged that the brake or brakes will be applied automatically in case of power failure;
- (e) if of a drum winder type, equipped with drum flanges of a height sufficient to provide a clearance of not less than twice the nominal diameter of the rope above the top layer of rope on the drum;
- (f) equipped with a device to indicate to the operator,
 - (i) position of conveyance in the hoistway,
 - (ii) limits of travel,
 - (iii) position at which underwind and overwind protective devices operate, and
 - (iv) position of all points at which landings may be made;
- (g) when the hoisting drum is of the free-running type, equipped with a pawl or other device that will hold the conveyance with its maximum load at any point in the hoistway;
- (h) provided with a disconnect switch at each location, wired in series, when the machine and the controller are in separate locations.
- (i) equipped with limit switches;
- (j) properly guarded to prevent injury to persons from gearing, shafting or other equipment;

- (*k*) capable of lifting the conveyance and its maximum allowable load, and it shall not be loaded beyond its rated capacity;
 - (*l*) not operated until the hoistway is provided with adequate overwind and underwind clearance;
 - (*m*) not used for the transportation of men at any time, unless equipped as a workmen's hoist.
- (2) Every workmen's hoist, in addition to the requirements of section 591, shall be, Workmen's
hoists
additional
require-
ments
- (*a*) equipped with two or more ropes;
 - (*b*) equipped with overwind and underwind limit switches activated by the movement of the conveyance or counterweight, and in the latter case, the overwind protective device may be located at the lower end of travel;
 - (*c*) equipped with a speed control device which shall automatically return to the "off" or "neutral" position when released;
 - (*d*) equipped with a slack rope device, a reverse phase relay and a stop motion switch where the hoist is of the drum winding type;
 - (*e*) so arranged that the brake or brakes shall be applied automatically in case of failure of electrical supply to the safety circuit, and one brake shall be mechanically applied and electrically released;
 - (*f*) so arranged that the power unit shall drive the hoist drum when the conveyance is being raised or lowered and no mechanism for disconnecting the hoist drum from the power unit shall be available;
 - (*g*) not used for the purpose of handling men and materials simultaneously with the exception of hand tools;
 - (*h*) not operated until the hoistway is provided with,
 - (i) buffers in the pit,
 - (ii) a counterweight guard at the bottom of the hoistway, and

(iii) an electro-mechanical interlock on each landing gate or a means to lock the gate mechanically so that it cannot be opened from the landing side unless the conveyance is at the landing, but at the lowest landing means of unlocking the gate from the landing side shall be provided;

(i) inoperable unless the conveyance doors and hoistway gates at all landings are fully closed;

(j) so arranged that control of the movement of the conveyance shall be by a conveyance-switch or push-button located in the conveyance with or without a push-button at each landing;

(k) provided with a Machinery Record Book in which shall be recorded inspections, tests, and other data as required.

Concrete
bucket
hoists

(3) The requirements of this Part applicable to construction hoists apply also to concrete bucket hoists, except that a conveyance safety device shall not be required.

Idem

(4) No person shall ride in or on a concrete bucket, except any person engaged in maintenance or repair work.

Chimney
hoists

(5) The plans and specifications for chimney hoists and the general arrangements of the installation shall be submitted to the chief engineer for approval before being put into use.

Tower
booms

(6) The bottom fastening of a boom to the tower shall be located at a level where guy ropes are fastened at horizontal girts, and the upper fastening for the boom shall be located at a distance not less than one-half the length of the boom above its bottom fastening and at a level where guy ropes are fastened at horizontal girts.

(7) The boom and its associated equipment shall be of an approved design and construction and operated in a safe manner.

(8) A qualified person shall be in charge of the operation of the boom. *New.*

GENERAL

- 597.—(1) No person shall wilfully damage or, without ^{Wilful damage to property} proper authority, remove or render useless any fencing, casing, lining, guide, means of signalling, signal, cover, chain, flange, horn, brake, indicator, ladder, platform, steam gauge, water gauge, safety valve, electrical equipment, fire-fighting equipment, first-aid equipment or other appliance or thing provided at a mine or plant in compliance with this Act. 1961-62, c. 81, s. 595.
- (2) No person under the influence of or carrying in- ^{Persons under the influence of or carrying liquor} toxicating liquor shall enter a mine or be in the proximity of a working place on the surface or near machinery in motion. 1961-62, c. 81, s. 596.
- (3) Abstracts of the provisions of this Act, authorized ^{Abstracts to be posted} by the chief engineer, shall be posted up in suitable places at the mine or works where they can be conveniently read, and the owner, agent or manager of the mine shall maintain such abstracts duly posted, and the removal or destruction of any of them is an offence against this Act. 1961-62, c. 81, s. 597.
- (4) The owner, agent or manager of a mine or plant shall ^{Act available} maintain a copy or copies of Parts IX and XI of this Act at each mine or plant and such Parts shall be available for reference on request by any employee.
- (5) The owner, agent or manager of a mine or plant shall ^{Name of district engineer posted} maintain a notice at each mine or plant in suitable places setting out the name, address and telephone number of the district engineer for the mine or plant. *New.*
- (6) The Minister may prescribe the charge to be made ^{Charges} for any record or log book required under this Part. 1961-62, c. 81, s. 598.

TESTING LABORATORIES

598. The Minister may, out of the moneys that are ^{Testing laboratories} appropriated for the purpose, establish, maintain and operate one or more laboratories for the purpose of testing or examining hoisting ropes or other appliances used in or about a mine and, by regulations made by the Lieutenant Governor in Council, may provide for,
- (a) the management and operation of such laboratory or laboratories;

- (b) the charges to be paid for services performed in such laboratory or laboratories;
- (c) such other purposes as the Lieutenant Governor in Council deems proper. 1961-62, c. 81, s. 599.

PARTY WALLS

Boundary operations

599.—(1) Subject to section 195 and except by agreement under subsection 3, no mining operations shall be carried on within a distance from the property boundary of a mine or mining property of twice the width or thickness of the orebody at the boundary, measured parallel to the boundary from foot wall to hanging wall and normal to the dip, and in no event shall mining operations be carried on within a distance of twenty feet from the boundary measured from the perpendicular to the boundary,

(a) except that, for the purposes of preliminary investigation, development headings may be advanced to twenty feet from the boundary; and

(b) except that exploratory diamond drilling may be done.

Exception

(2) Subsection 1 does not apply to operations at sand, gravel or clay pits or open-cast rock quarries. 1961-62, c. 81, s. 600 (1, 2).

Agreement by adjoining owners or their agents

(3) Adjoining owners or their agents may, by agreement in writing signed by them, carry on mining operations within the distances from the property boundary mentioned in subsection 1.

Certified copies to chief engineer

(4) Two certified copies of every such agreement shall be sent to the chief engineer. 1961-62, c. 81, s. 600 (3, 4), *amended*.

Disagreement on boundary operations

600.—(1) Where adjoining owners or their agents are unable to agree to carry on mining operations within the distances from the property boundary mentioned in subsection 1 of section 599, application may be made to the Minister by either owner or his agent requesting the appointment of a committee to investigate in what manner and within what distances from the boundary mining operations may be carried on. 1961-62, c. 81, s. 601 (1), *amended*.

Appointment of committee

(2) Upon receipt of an application under subsection 1, the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to investigate mining conditions at the boundary.

- (3) The committee so appointed shall hear representations from the adjoining owners and conduct such investigation of mining conditions on the adjoining mining properties as may be necessary at a time or times named by the Minister. Duty of committee
 - (4) Upon completion of their investigation, the committee shall forthwith submit a report in writing to the Minister with recommendations concerning terms and conditions of mining operations at the boundary. Report of committee
 - (5) Upon receipt of the report of the committee, the Minister may issue an order establishing the terms and conditions to be observed in mining operations at the boundary and shall fix the costs of the committee to the adjoining owners. 1961-62, c. 81, s. 601 (2-5). Order of Minister
- 601.—(1) Where the owner or his agent of a mine or mining property has reason to believe that a breach has been made in or a trespass has been committed with respect to the party wall between his mine or mining property and an adjoining mine or mining property, application may be made to the Minister by the owner for the appointment of a committee to examine the party wall and enter the adjoining mines or mining properties with an assistant or assistants and use where necessary the workings and appliances thereof. 1961-62, c. 81, s. 602 (1), *amended*. Suspected breach or trespass of party wall
- (2) Upon receipt of an application under subsection 1, the Minister may appoint a committee of three disinterested persons, one of whom shall be designated chairman, who are competent to conduct such examination of the party wall as may be necessary. Appointment of committee
 - (3) The committee so appointed shall conduct such examination of the party wall as may be necessary at a time or times named by the Minister. Duty of committee
 - (4) Upon completion of the examination the committee shall forthwith submit a report of its findings in writing to the Minister. Report of committee
 - (5) Upon receipt of the report of the committee, the Minister shall fix the costs of the committee to one or both owners. Costs
 - (6) Where a breach has been made in a party wall of a mine by the owner of an adjoining mine, or by his Breach of party wall

employees or agents, without the permission in writing of the owner of the first-mentioned mine or without authority under this Act, the Minister may make an order directing the offending owner to close the breach permanently or to carry out such measures as the Minister deems necessary to prevent water from flowing into the mine of the owner complaining of the breach.

Minister
may
authorize
entry

- (7) Where work has been discontinued in the mine of the offending owner or where expedient for any other reason, the Minister may authorize the owner complaining of the breach, his employees or agents, to enter the mine and works of the offending owner to erect bulkheads and carry out such measures as the Minister deems necessary to protect from damage the mine of the owner complaining of the breach and his employees and agents from danger from from accumulations of water in the mine of the offending owner. 1961-62, c. 81, s. 602 (2-7).

Minister
may vary or
rescind
order

602. For good cause shown and upon such terms as seem just, the Minister may vary or rescind an order made under section 600 or 601. 1961-62, c. 81, s. 603.

BRINE WELLS

Interpre-
tation

- 603.—(1) In this section,

(a) "brine well" means a hole or opening in the ground for use in brining;

(b) "brining" means the extraction of salt in solution by any method. 1961-62, c. 81, s. 604 (1).

Permit to
bore or drill
a brine well

- (2) No person shall drill or bore a brine well except under the authority of a permit in writing issued by the chief engineer upon application therefor in the prescribed form. 1961-62, c. 81, s. 604 (2), *amended*.

Permits not
issued

- (3) A permit shall not be issued,

(a) to authorize a person to drill or bore a brine well on property in which he does not own, hold or lease, or is not otherwise entitled to, the mining rights; or

(b) where the proposed brine well is nearer the boundary of such property than 500 feet.

- (4) The chief engineer may reduce or extend the distance referred to in clause *b* of subsection 3 where in his opinion it is advisable to do so and shall notify the applicant of any such reduction or extension within thirty days from the date upon which the application for the permit is filed. Location of brine well
- (5) A permit is subject to the condition that the brine well in respect of which it is issued is bored or drilled in the location described in the permit. 1961-62, c. 81, s. 604 (3-5). Condition of permit
- (6) A permit shall be issued or refused within thirty days from the date on which the application therefor is filed, except that, where notice has been given by the chief engineer under subsection 4, the permit shall be issued upon the receipt by the chief engineer of the applicant's consent thereto. 1961-62, c. 81, s. 604 (6), *amended*. Time for issuance of permit
- (7) Where a person drills or bores a brine well, he shall forward a log of the drilling or boring in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the drilling or boring operations, and, upon his request in writing, the log shall be confidential for a period of six months. Log of drilling operations
- (8) A person boring or drilling a brine well shall take such reasonable measures as are necessary to control the infiltration of water from one horizon to any other horizon that may be penetrated during the drilling or boring operations. Protection of water horizons
- (9) All brine wells shall be cased and equipped so as to reasonably ensure against the uncontrolled flow of oil, natural gas, brine or water. Protection of deposits
- (10) Casing and equipment shall be in good condition and of a thickness and strength adequate to withstand any fluid pressure to which they might normally be subjected. Standard of casing and equipment
- (11) Where practicable, all brine wells shall be plugged by the person operating them, before being abandoned, in a manner that will, Plugging of abandoned wells
 - (a) reasonably ensure that salt horizons and potential oil or natural gas producing horizons are protected; and
 - (b) retain water and brine in their original formations.

Report of
proposed
plugging

- (12) Before commencing to plug a brine well, the person proposing to carry out the plugging operations shall report the particulars thereof to the chief engineer in the prescribed form.

Record of
plugging
operations

- (13) Where a person plugs a brine well, he shall forward a record of the plugging in the prescribed form in duplicate to the chief engineer within thirty days of the completion of the plugging operations. 1961-62, c. 81, s. 604 (7-13).

FATAL ACCIDENTS

Notice

- 604.—(1) The manager or other person in charge of a mine or plant wherein or in connection wherewith a fatal accident occurs shall forthwith notify a coroner having jurisdiction in the place where the accident occurred.

Inquest

- (2) Where a fatal accident occurs in or in connection with a mine or plant, an inquest shall be held.

Right of
engineer
re inquest

- (3) The engineer and any person authorized to act on his behalf are entitled to be present and to examine or cross-examine any witness at an inquest held concerning a death caused by an accident at a mine or plant, and, if the engineer or someone on his behalf is not present, the coroner shall, before proceeding with the evidence, adjourn the inquest and give the Deputy Minister not less than four days notice of the time and place at which the evidence is to be taken.

Notice of
fatal
accidents

- (4) Where, in or about a mine, plant, quarry, or sand, clay or gravel pit, an accident occurs that causes loss of life to a person employed thereat, the owner, agent, manager or superintendent thereof shall immediately notify the engineer resident in that part of Ontario in which the accident occurred and the chief engineer by telephone or telegraph.

Scene to be
undisturbed

- (5) Subject to subsection 6, no person shall, except for the purpose of saving life or relieving human suffering, interfere with, destroy, carry away or alter the position of any wreckage, article or thing at the scene of or connected with the accident until the engineer has completed an investigation of the circumstances surrounding the accident.

- (6) Where it is impossible for the engineer to make an immediate investigation of an accident, the chief engineer or engineer may permit the wreckage, article and things at the scene of or connected with the accident to be moved to such extent as is necessary to permit the work of the mine, plant, quarry, or sand, clay or gravel pit, to be proceeded with, if photographs or drawings showing details of the scene of the accident have been made prior to the moving. 1961-62, c. 81, s. 169, *amended*.

NON-FATAL ACCIDENTS

605. Where, in or about a mine, plant, quarry, or a sand, clay or gravel pit, an accident occurs to a person employed therein that causes fracture or dislocation of any bones of the body, or any other injury that in the opinion of the attending physician may result in the injured person being incapacitated for regular work for at least one day, the owner, agent or manager shall within three days of the accident send notice in writing to the engineer resident in that part of Ontario in which the mine, plant, quarry or pit is situate on the form prescribed for such purpose. 1961-62, c. 81, s. 605, *amended*.

SPECIAL OCCURRENCES

- 606.—(1) Where, in or about a mine or plant,
- (a) an accident involving the hoist, sheaves, hoisting rope, shaft or winze conveyance, or shaft or winze timbering;
 - (b) an explosion or fire involving an air compressor, air receiver or compressed air line;
 - (c) an inrush of water from old workings or otherwise;
 - (d) a failure of an underground dam or bulkhead, as defined by subsection 1 of section 278;
 - (e) an outbreak of fire below ground or an outbreak of fire above ground if it endangers any structure of the mine plant;
 - (f) a premature or unexpected explosion or ignition of explosives or blasting agents;

- (g) an asphyxiation effecting a partial or total loss of physical control;
- (h) a flammable gas in the mine workings;
- (i) an unexpected and non-controlled extensive subsidence or caving of mine workings; or
- (j) a failure or incident which causes, or threatens to cause, injury to personnel or damage to major equipment or property involving,
 - (i) electrical equipment,
 - (ii) standard gauge railway equipment, or
 - (iii) crane equipment,

occurs, whether or not loss of life or personal injury is caused thereby, the owner, agent or manager of the mine shall, within the twenty-four hours next after the occurrence, send notice in writing in duplicate to the engineer resident in that part of Ontario in which the mine or plant is situate and shall furnish, upon request, such particulars in respect thereof as the engineer requires.

Notice of
fire and
need of
rescue
equipment

- (2) Where, in or about a mine, an outbreak of fire occurs that endangers the health or safety of one or more persons and the services of the mine rescue stations are required, the manager shall immediately notify the mine rescue training officer and the district mining engineer resident in that part of Ontario in which the mine is situate.

Rockburst

- (3) Where a rockburst occurs, whether or not loss of life or personal injury is caused thereby, and its location is determined as being within the workings of a mine, the manager of the mine shall, within the twenty-four hours next after the location of the burst has been determined, send notice in writing to the district mining engineer resident in that part of Ontario in which the mine is situate and shall furnish, upon request, such particulars with respect thereto as the engineer requires.

Record of
rockbursts

- (4) A record of the occurrence of all rockbursts at a mine shall be kept, showing, as far as possible, the time, location, extent of the burst, any injury to persons and any other information pertaining to the

burst, and such record shall be available to the district mining engineer at all times. 1961-62, c. 81, s. 606, *amended*.

OTHER NOTICES AND INFORMATION

607.—(1) The owner or agent of a mine or plant shall give ^{Written notice by owner or agent} or cause the manager to give to the chief engineer and to the district mining engineer resident in that part of Ontario in which the mine or plant is situate, written notice of,

- (a) (i) the intended installation of, including the specifications and layout of,
 - 1. any mine hoisting facilities,
 - 2. any power supply facilities, and
 - 3. any ore treatment facilities,
- (ii) the lot, concession and township on which the operations are to commence,
- (iii) the name and address of the person in charge;
- (b) the connection or reconnection of any mining electrical equipment with a source of electrical energy controlled by any other person, at least fourteen days prior to the connection or reconnection;
- (c) the commencement, or resumption after an interruption of one month or more, of mining operations, within fourteen days after the commencement or resumption; and
- (d) the closing down of the mine and that,
 - (i) the requirements of subsection 1 of section 168 as to the fencing of the top of the shaft, entrances from the surface, pits and openings,
 - (ii) the requirements of section 289 as to the disposal of explosives and blasting agents,
 - (iii) the requirements of section 351 as to the abandonment of a shaft compartment for hoisting purposes and as to the removal and disposition of hoisting ropes,

(iv) the requirements of section 425 as to the disconnection of the supply station from the power source and notification of same to the chief engineer, and

(v) the requirements of subsections 7 and 8 of section 609 as to the filing of plans and sections,

have been complied with within fourteen days of the closing down.

Information
for
engineer

(2) The owner, agent or manager of a mine or plant shall furnish to the engineer resident in that part of Ontario in which the mine or plant is situate all information that the engineer requires for the purposes of his returns. 1961-62, c. 81, s. 607, *amended*.

STATISTICAL RETURNS

Statistical
returns

608.—(1) For the purpose of their tabulation, under the instruction of the Minister, the owner, agent or manager of every mine, plant, pit, quarry or other works to which this Act applies shall, on or before the 31st day of March in every year, send to the Department on the forms supplied a correct return for the year that ended on the 31st day of December next preceding, showing the number of persons ordinarily employed below and above ground respectively, the total amount of wages paid during the year, the quantity in standard weight of the minerals dressed and of the undressed mineral that has been sold, treated or used during such year, and the value or estimated value thereof, and such other particulars as the Minister by regulation prescribes.

Monthly or
quarterly
returns

(2) The owner, agent or manager of every metalliferous mine shall, if required, make a similar return for the month or quarter at the end of each month or quarter of the calendar year.

Offence

(3) Every owner, agent or manager of a mine, plant, pit, quarry or other works who fails to comply with this section, or makes a return that is to his knowledge false in any particular, is guilty of an offence against this Act. 1961-62, c. 81, s. 608, *amended*.

MINE OR PLANT PLANS

Plans to be
kept

609.—(1) At every mine, the owner, agent or manager shall cause the following plans on a scale acceptable to the

chief engineer to be kept up to a date not more than six months last past:

1. A surface plan showing the boundaries of the property, the co-ordinates of the section of property under which mining has been done, all lakes, streams, roads, railways, electric power transmission lines, main pipe lines, buildings, adits, open surface workings, diamond-drill holes, outcroppings of rock, dumps, tailings-disposal sites and shafts, the latter having been geographically located by connection with a survey on record with the Department.
 2. The method of capping any opening shall be described on the plans referred to in item 1.
 3. Underground plans of each level and section showing all underground workings, including shafts and tunnels, diamond-drill holes, dams and bulkheads, and each level plan shall be shown on a separate drawing.
 4. Vertical mine sections at suitable intervals and at suitable azimuths, showing all shafts, tunnels, drifts, stopes and other mine workings in relation to the surface, including the location of the top of the bedrock, surface of the overburden and the bottom and surface of any known watercourse or body of water, and each section shall be shown on a separate drawing.
 5. Adequate ventilation plans, showing the direction and volume of the main air currents, the location of permanent fans, ventilation doors and stoppings, and connections with adjacent mines.
- (2) The owner, agent or manager of every mine in which ^{Idem} electricity is used underground shall keep or cause to be kept up to a date not more than six months last past an adequate plan or diagram showing on a suitable scale the following information:
1. The position of all fixed electrical apparatus in the mine.
 2. The routes of all fixed power feeders and fixed branch feeders properly noted and referenced.

3. The rating of all electrical feeder control apparatus and equipment.

- | | |
|--------------------------------------|--|
| Idem | (3) Such plans or diagrams shall be available to the district electrical-mechanical engineer at all times and copies of the plans or diagrams shall be furnished him upon request. |
| Plans to be available to engineer | (4) On any examination or inspection of a mine or plant, the owner, agent or manager shall, if required, produce to the engineer or other person authorized by the Minister or the Deputy Minister all plans and sections of the workings referred to in subsections 1, 2 and 3. |
| Marking subsequent progress on plan | (5) The owner, agent or manager shall, if required by the engineer or other person authorized by the Minister or Deputy Minister, cause to be marked on such plans and sections the progress of the mine up to the time of the examination or inspection, and shall furnish him with a copy or tracing thereof. |
| Plans of working mines to be filed | (6) A certified copy of the plans required by paragraph 3 of subsection 1 and mine sections showing all shafts as required by paragraph 4 of subsection 1 shall be made and forwarded to the chief engineer on or before the 31st day of March in each year, showing the workings of the mine up to and including the 31st day of December next preceding. |
| Plans to be filed before abandonment | (7) Before a mine or part of a mine is abandoned, closed down or otherwise rendered inaccessible, all underground plans and sections referred to in paragraphs 3 and 4 of subsection 1 shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer. |
| Idem | (8) Before work at a mine ceases, the surface plan referred to in paragraph 1 of subsection 1 showing all openings to underground workings shall be brought up to date and two certified copies forwarded, one to the chief engineer, the other to the district mining engineer. |
| Responsibility of owner | (9) The owner, agent or manager of every mine, plant, pit, quarry or other works to which this section applies is responsible for compliance with the provisions thereof and every owner, agent or manager or other person who fails to comply with any of the |

provisions of this section, or who produces to an engineer or other authorized person, or files or causes to be produced or filed, a plan that to his knowledge is false in any particular is guilty of an offence against this Act.

- (10) Every such plan shall be treated as confidential information for the use of the officers of the Department and shall not be exhibited, nor shall any information contained therein be imparted to any person except with the written permission of the owner or agent of the mine or plant. 1961-62, c. 81, s. 609, *amended*. Plans to be treated as confidential

POWERS AND DUTIES OF ENGINEERS

610.—(1) It is the duty of the engineer and he has power, Powers of engineer

- (a) to make such examination and inquiry as he deems necessary to ascertain whether this Act is complied with, and to give notice in writing to the owner, agent or manager of any particulars in which he considers the mine or plant or any part thereof, or any matter, thing or practice, to be dangerous or defective or contrary to this Act, and to require the same to be remedied within the time named in the notice;
- (b) to enter, inspect and examine any mine or plant or any part thereof at any reasonable time by day or night, but so as not to unnecessarily impede or obstruct the working of the mine or plant;
- (c) to order the immediate cessation of work in and the departure of all persons from any mine or plant or part thereof that he considers unsafe, or to allow persons to continue to work therein on such precautions being taken as he deems necessary; and
- (d) to exercise such other powers as he deems necessary for ensuring the health and safety of miners and all other persons employed in or about mines, plants, pits, quarries or other works.

- (2) It is the duty of the engineer to make a report of every examination and inquiry made in the course of his duties during the year to the Minister, the Deputy Minister or the chief engineer, as required by Reports of engineer

the circumstances, immediately upon the completion of the examination or inquiry. 1961-62, c. 81, s. 610, *amended*.

Special
report

611.—(1) The Minister may direct an engineer to make a special report with respect to any accident in or about a mine or plant that has caused the loss of life or injury to any person, or with respect to any condition in or about a mine or plant. 1961-62, c. 81, s. 611 (1), *amended*.

Engineer
may take
evidence

(2) In conducting the inquiry, the engineer has power to compel the attendance of witnesses and the production of books, documents and things, and to take evidence upon oath. 1961-62, c. 81, s. 611 (2).

Offence

612.—(1) Non-compliance with a written order of the engineer issued in accordance with section 610 shall be deemed an offence against this Part.

Idem

(2) Failure to give written notice of the completion of any work in accordance with a written order of the engineer issued under section 610 shall be deemed an offence against this Part. 1961-62, c. 81, s. 612.

R.S.O. 1960,
c. 241,
Pt. XI
(1961-62,
c. 81, s. 1).
re-enacted

3. Part XI of *The Mining Act*, as re-enacted by section 1 of *The Mining Amendment Act, 1961-62*, is repealed and the following substituted therefor:

PART XI

OFFENCES, PENALTIES AND PROSECUTIONS

Offences

620.—(1) Every person who,

- (a) prospects, occupies or works any Crown lands or mining rights for minerals otherwise than in accordance with this Act;
- (b) performs or causes to be performed on any Crown lands, or on any lands where the mining rights are in the Crown, any boring by diamond or other core drill for the purpose of locating valuable mineral in place, except where such Crown lands or mining rights have been staked out and recorded as a mining claim in accordance with this Act;
- (c) wilfully defaces, alters, removes or disturbs any post, stake, picket, boundary line, figure,

writing or other mark lawfully placed, standing or made under this Act;

- (d) wilfully pulls down, injures or defaces any rules or notices posted up by the owner, agent or manager of a mine or plant;
- (e) wilfully obstructs the Commissioner or any officer appointed under this Act in the execution of his duty;
- (f) being the owner or agent of a mine, refuses or neglects to furnish to the Commissioner or to any person appointed by him or to any officer appointed under this Act the means necessary for making an entry, inspection, examination or inquiry in relation to a mine under this Act, other than Part IX;
- (g) unlawfully marks or stakes out in whole or in part a mining claim, a placer mining claim, or an area for a boring permit;
- (h) wilfully acts in contravention of this Act, other than Part IX or Part X, in any particular not hereinbefore set forth;
- (i) wilfully contravenes any provision of this Act or any regulation for the contravention of which no other penalty is provided;
- (j) wilfully makes any material change in the wording or numbering of a miner's licence after its issue; or
- (k) attempts to do any of the acts mentioned in the foregoing clauses,

is guilty of an offence against this Act and is liable to a fine of not more than \$20 for every day upon which the offence occurs or continues. 1961-62, c. 81, s. 620 (1), *amended*.

- (2) Every person who knowingly makes a false statement^{False statements} in an application, certificate, report, statement or other document filed or made as required by or under this Act or the regulations is guilty of an offence and is liable to a fine of \$500 or to imprisonment for a term of not more than six months, or to both. 1961-62, c. 81, s. 620 (2).

Smelters

621.—(1) No person shall construct or cause to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals that may result in the escape or release into the open air of sulphur, arsenic or other fumes in quantities that may injure trees or other vegetation unless and until the site of the plant has been approved by the Lieutenant Governor in Council.

Offence

(2) Every person who constructs or causes to be constructed a plant for the smelting, roasting, refining or other treatment of ores or minerals, without the approval of the Lieutenant Governor in Council, and sulphur, arsenic or other fumes escape or are released therefrom into the open air and injure trees or other vegetation is guilty of an offence and is liable to a fine of not more than \$1,000 for every day upon which such fumes escape or are released therefrom into the open air. 1961-62, c. 81, s. 621.

Disobeying
order or
award of
Commis-
sioner

622. Every person who wilfully neglects or refuses to obey any order or award of the Commissioner, except for the payment of money, is, in addition to any other liability, liable to a fine of not more than \$250 and, upon conviction thereof, is liable to imprisonment for a term of not more than six months unless the fine and costs are sooner paid. 1961-62, c. 81, s. 622.

Use of word
"Bureau"
prohibited

623.—(1) No person who,

- (a) carries on the business of mining or dealing in mines, mining claims, mining lands, or mining rights, or the shares, stocks, or bonds of a mining company; or
- (b) acts as broker or agent in or for the disposal of mines, mining claims, mining lands, or mining rights, or of any such shares, stocks or bonds; or
- (c) offers or undertakes to examine or report on a mine, mining claim, mining land or mining rights,

shall use the word "Bureau" as the name or title or part of the name or title under which he acts or carries on business.

Offence

(2) Every person who contravenes any of the provisions of this section is guilty of an offence and is liable to a fine of not more than \$20 for every day upon which

the offence occurs or continues. 1961-62, c. 81, s. 623.

- 624.—(1) In this section, the noun “mine” includes Interpre-
tation “plant” as defined in Part IX. *New.*
- (2) An owner, agent or other person who contravenes Penalty for
offence
against
Part IX any provision of Part IX is guilty of an offence and is liable to a fine of not more than \$1,000.
- (3) Where the Deputy Minister or an engineer has given Additional
penalty for
continuing
offence written notice to an owner or agent or a person engaged or employed in or about a mine that an offence has been committed against Part IX, such owner or agent or other person is liable to a further fine of not more than \$100 for every day upon which the offence continues after such notice.
- (4) An owner, agent or other person is, upon conviction, Imprison-
ment liable to imprisonment for a term of not more than three months unless the fine and costs are sooner paid.
- (5) Where the offence is one that might have endangered Imprison-
ment of
offender
against
Part IX
in certain
cases the safety of those employed in or about the mine or caused serious personal injury or a dangerous accident, and was committed wilfully by the personal act, default or negligence of the accused, every person who is guilty of an offence against Part IX is, in addition to or in substitution for any fine that may be imposed, liable to imprisonment with or without hard labour for a term of not more than three months. 1961-62, c. 81, s. 624.
- 625.—(1) No prosecution shall be instituted for an offence Instituting
prosecutions
for offences against Part IX or Part X or any regulation made in pursuance thereof except,
- (a) by an engineer;
- (b) by direction of the county or district Crown attorney; or
- (c) by the leave in writing of the Minister of Justice and Attorney General,
- or for an offence against any other provision of this Act or of any regulation made in pursuance thereof except,

(d) by or by leave of the Commissioner or a recorder;

(e) by direction of the county or district Crown attorney; or

(f) by leave of the Minister of Justice and Attorney General.

When
person not
actual
offender not
liable

(2) No person not being the actual offender is liable in respect of such offence if he proves that he did not participate in the contravention of the provision for a breach of which he is charged and that he was not to blame for the breach and that according to his position and authority he took all reasonable means in his power to prevent the breach and to secure compliance with the provisions of Part IX or Part X.

Onus of
proof

(3) The burden of proving that the provisions of sections 172 to 596 have been suspended is upon the person charged with a contravention thereof and any such suspension may be proved by the evidence or certificate of an engineer. 1961-62, c. 81, s. 625.

Procedure
on
prosecutions

626. Except as to offences against section 14, every prosecution for an offence against or for the recovery of a penalty imposed by or under the authority of this Act shall take place before a provincial judge or before the Commissioner, and, save as herein otherwise provided, *The Summary Convictions Act* applies to every such prosecution. 1961-62, c. 81, s. 626, *amended*.

R.S.O. 1960,
c. 387

Commence-
ment

4. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

5. This Act may be cited as *The Mining Amendment Act, 1970*.

An Act to amend The Mining Act

1st Reading

February 27, 1969

2nd Reading

April 2nd, 1970

3rd Reading

November 13th, 1970

MR. LAWRENCE (St. George)

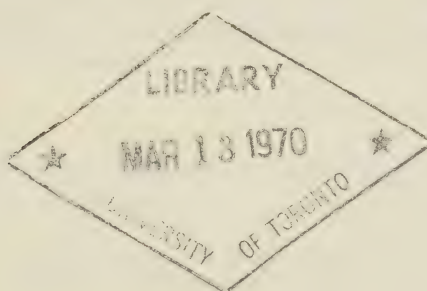
BILL 3

Permanent
Publication

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

The Occupational Safety Act, 1970

MR. SHULMAN



TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

EXPLANATORY NOTES

The Bill replaces a series of Acts dealing with safety matters and brings the whole field of occupational safety under one statute.

The Ontario Safety Advisory Board replaces the present Labour Safety Council of Ontario, and is given expanded powers.

BILL 3

1970

The Occupational Safety Act, 1970

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,

Interpre-
tation

- (a) "Board" means the Ontario Safety Advisory Board;
- (b) "Department" means the Department of Labour;
- (c) "Minister" means the Minister of Labour.

2. This Act applies to every employee, employer and owner Application and to every place of employment.

3. There shall be appointed such persons as are necessary Appointment to administer the provisions of this Act and the regulations.

4. There shall be a board known as the "Ontario Safety Establish-
ment of
board Advisory Board" consisting of not fewer than three members, one of whom shall be the chairman.

5. The Board shall,

Duties of
Board

- (a) advise the Minister on all matters pertaining to the administration of this Act;
- (b) examine the effectiveness of the legislation and recommend additions, deletions and amendments;
- (c) conduct public hearings and consider all views respecting proposed or existing safety standards; and
- (d) grant permission for an employer or employee to deviate from the standards in special circumstances under such conditions as the Board considers to provide a reasonable standard of safety under such circumstances.

Liability

6. —(1) Neither the members of the Board, any of its staff nor any officer of the Department is personally liable for anything done by it or by him under the authority of this Act.

Appoint-
ments

(2) The Minister may appoint such persons and committees as he deems necessary to assist the Board in carrying out its duties.

Appeal

(3) A person who believes a decision of the Board to be unjust may appeal in writing to the Minister within fifteen days of the date that the decision was announced, setting out his reasons for his belief, and, if the Minister deems the reasons to so warrant, he may direct the Board to hold additional hearings and review its decision in the light of the additional evidence presented.

Duties of
employer

7. Every person operating or carrying on a place of employment shall,

- (a) do so in a manner that will not endanger the safety or health of any person employed thereon or in connection therewith;
- (b) comply with this Act and the regulations;
- (c) adopt and carry out such procedures and techniques as will prevent or reduce the risk of injury to employees and other persons having access to the place of employment; and
- (d) ensure that the equipment, materials and safeguards prescribed by the regulations are provided and available.

Acts
endangering
safety
prohibited

8. No person shall,

- (a) endanger his safety or that of another person;
- (b) move, alter or destroy any safeguards, equipment or device furnished for protection, without the permission of the employer; or
- (c) use or operate any equipment, machine, device or thing in an unsafe manner.

When
machine,
etc., not to
be used

9. No person who has reasonable cause to believe that any machine, vehicle, tool, equipment, device or thing, or any part thereof, is unsafe or in contravention of this Act, or the regulations, shall use or operate or cause or permit it to be used or operated.

10. Non-compliance with a standard prescribed by the regulations shall be deemed to endanger the safety of persons in the place of employment except where alternative safeguards have been provided which the Board deems to be adequate for the purposes intended. Non-compliance with regulations

11. Where a person is killed or is critically injured, the employer shall immediately notify an officer of the Department by telephone, telegraph or in person of the occurrence and shall send him a written report of the occurrence. Death or critical injury

12. An officer who receives a notice under section 11 shall immediately upon receipt thereof, notify the Executive Director of Safety Services and forthwith investigate the circumstances of the occurrence. Notification of accident

13. Where a person is killed or is critically injured, no person shall, except for the purposes of, Interference with wreckage, etc.

(a) saving life or relieving suffering; or

(b) maintaining an essential public utility service or a public transportation system,

interfere with, disturb, destroy, alter or carry away any wreckage, article or thing at the scene of, or connected with the occurrence until permission so to do has been given by an officer.

14. Section 13 does not apply where the occurrence was investigated by a constable or other police officer and the constable or other police officer is satisfied that such action will not be detrimental to further investigation by an officer of the Department. Idem

15. Subject to section 16, every person who contravenes any provision of this Act is guilty of an offence under this Act and on summary conviction is liable to a fine of not more than \$1,000 or imprisonment for a term of not more than twelve months or to both. Offence

16. Where a corporation is convicted of an offence under section 15, the maximum penalty that may be imposed is \$5,000. Penalty

17. The laying of a charge or a conviction under this Act shall in no way affect a decision of the Workmen's Compensation Board respecting the levy to be paid by the employer under *The Workmen's Compensation Act*. Decision of Workmen's Compensation Board not affected R.S.O. 1960, c. 437

- Time limit for prosecution** **18.** No prosecution under this Act shall be instituted more than one year after the last act or default upon which the prosecution is based occurred.
- Liability** **19.** Where there is an act or default that constitutes an offence under this Act or the regulations and the act or default has in fact been committed or made by a person other than the employer or owner, such person is liable to the same penalty or punishment as if he were the employer or owner.
- Information** **20.** It is sufficient in an information for an offence under this Act or the regulations to name the employer or owner by stating the ostensible employer or owner, or the firm by which the employer or owner is usually known.
- Fees** **21.—**(1) All fees collected under this Act and the regulations and all fines recovered for offences under this Act or the regulations shall be paid to the Treasurer of Ontario and form part of the Consolidated Revenue Fund.
- Source of funds** (2) Funds to provide for the administration of this Act and the regulations shall be obtained by a levy of 3 per cent on the moneys collected under *The Workmen's Compensation Act* and by such additional funds as are allocated by the Legislature.
- R.S.O. 1960, c. 437**
- Regulations** **22.—**(1) The Lieutenant Governor in Council may make regulations,
- (a) prescribing the duties, qualifications and procedures of the Board and its staff;
 - (b) prescribing the duties and qualifications of officers of the Department.
 - (c) prescribing safeguards and inspection procedures for,
 - (i) elevating devices,
 - (ii) boilers and pressure vessels,
 - (iii) midway rides,
 - (iv) motor vehicle racing,
 - (v) any matter, device or thing to be used in a place of employment,
 - (vi) places of employment;

- (d) prescribing codes which are considered to fulfil the intent of this Act and the regulations for the safety of any technical device to be used in a place of employment;
- (e) exempting any person or any class of persons from the application of the regulations, or of any of the provisions thereof;
- (f) prescribing forms and providing for their use, including the conditions under which they may be issued, suspended or cancelled;
- (g) providing for the submission of drawings and specifications of technical devices and structures covered by the regulations;
- (h) prescribing physical requirements and qualifications of persons who may be employed in a particular occupation;
- (i) prescribing the conditions under which a child may be employed or present in a place of employment;
- (j) prescribing the conditions under which the safety of persons is deemed to be endangered for the purposes of this Act;
- (k) prescribing the reports to be submitted to the Board or the Department or the Workmen's Compensation Board or other agency;
- (l) prohibiting employment or modifying or limiting the hours of employment of any person in connection with a place of employment;
- (m) prescribing the qualifications of persons required to perform specific tasks;
- (n) regulating or prohibiting the use of any machine, device or thing;
- (o) respecting the procedure for appealing from an officer's direction or for an exemption from a provision of the regulations;
- (p) respecting any matter to carry out effectively the intent and purpose of this Act.

23. The following are repealed:

Repeal:

1. *The Boilers and Pressure Vessels Act, 1962-63.*

1962-63, c. 8

- | | |
|---|---|
| 1960-61, c. 11 | 2. <i>The Construction Hoists Act, 1960-61.</i> |
| 1961-62, c. 17 | 3. <i>The Construction Hoists Amendment Act, 1961-62.</i> |
| 1962-63, c. 21 | 4. <i>The Construction Hoists Amendment Act, 1962-63.</i> |
| R.S.O. 1960,
c. 97, s. 9a
(1961-62,
c. 32, s. 1) | 5. Section 9a of <i>The Department of Labour Act</i> , as enacted by section 1 of <i>The Department of Labour Amendment Act, 1961-62.</i> |
| R.S.O. 1960,
c. 97, s. 10,
subs. 1 | 6. Subsection 1 of section 10 of <i>The Department of Labour Act</i> , as amended by section 1 of <i>The Department of Labour Amendment Act, 1962-63.</i> |
| R.S.O. 1960,
c. 119 | 7. <i>The Elevators and Lifts Act.</i> |
| 1961-62, c. 38 | 8. <i>The Elevators and Lifts Amendment Act, 1961-62.</i> |
| 1965, c. 35 | 9. <i>The Elevators and Lifts Amendment Act, 1965.</i> |
| 1964, c. 45 | 10. <i>The Industrial Safety Act, 1964.</i> |
| 1968, c. 56 | 11. <i>The Industrial Safety Amendment Act, 1968.</i> |
| 1968-69, c. 52 | 12. <i>The Industrial Safety Amendment Act, 1968-69.</i> |
| R.S.O. 1960,
c. 407 | 13. <i>The Trench Excavators' Protection Act.</i> |
| 1965, c. 133 | 14. <i>The Trench Excavators' Protection Amendment Act, 1965.</i> |
| Commence-
ment | 24. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation. |
| Short title | 25. This Act may be cited as <i>The Occupational Safety Act, 1970.</i> |

The Occupational Safety Act, 1970

1st Reading

February 26th, 1970

2nd Reading

3rd Reading

MR. SHULMAN

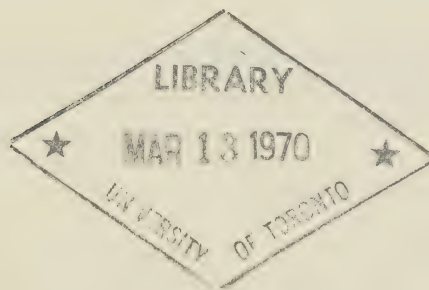
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BILL 4

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to amend The Bills of Sale and Chattel Mortgages Act

MR. WISHART



EXPLANATORY NOTES

The primary purpose of this Bill is to provide for requiring by regulation that when instruments are tendered for registration under the Act they be accompanied by a statement in a prescribed form, in order to make possible the assimilation of the necessary information into the central office of the registration system to be established under *The Personal Property Security Act, 1967*. Since the registration system will make use of automatic data processing equipment information must be presented in a fixed format for ready conversion into machine-readable language.

Certain other transitional provisions are added to the Act.

SECTION 1—Subsection 1. Self-explanatory.

Subsection 2. The reference to the Provincial Secretary is changed to a reference to the Minister of Financial and Commercial Affairs in accordance with administrative procedure.

SECTION 2. The new section added provides that where a mortgage is made out of Ontario and the goods and chattels are brought into Ontario the mortgage is subject to the Act and a true copy may be registered in lieu of the original mortgage.

BILL 4

1970

An Act to amend The Bills of Sale and Chattel Mortgages Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Section 1 of *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following clauses: R.S.O. 1960,
c. 34, s. 1,
amended

(da) “prescribed form” means a form provided or approved under this Act by the registrar;

(db) “registrar” means the registrar of personal property security appointed under *The Personal Property Security Act, 1967*; 1967, c. 73

(2) The said section 1 is further amended by adding thereto the following subsection: R.S.O. 1960,
c. 34, s. 1,
amended

(2) Any reference in this Act to the Provincial Secretary shall be deemed to be a reference to the Minister of Financial and Commercial Affairs. Reference to
Provincial
Secretary

2. *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following section: R.S.O. 1960,
c. 34,
amended

5a. Where a mortgage has been made out of Ontario with reference to goods and chattels not then in Ontario which if made in Ontario with reference to goods and chattels in Ontario would come within this Act and the goods and chattels are brought into Ontario, the mortgage is subject to this Act, but the period for registering in the office of the clerk of the county or district court of the county or district to which the property mortgaged is brought is within sixty days after the date on which the goods and chattels are brought into Ontario, and a true copy of the mortgage may be registered in lieu of the original thereof. Mortgage
made out of
Ontario and
goods sub-
sequently
brought into
Ontario

R.S.O. 1960,
c. 34, s. 9,
amended

3. Section 9 of *The Bills of Sale and Chattel Mortgages Act* is amended by inserting after "therein" in the second line "or in any prescribed form relating thereto", so that the section shall read as follows:

When
defects not
to invalidate

9. A mortgage or conveyance is not invalidated by reason only of clerical errors or omissions therein or in any prescribed form relating thereto or in the affidavits of execution and *bona fides* unless such errors or omissions are calculated to mislead or deceive or have the effect of misleading or deceiving.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1),
amended

4.—(1) Section 13 of *The Bills of Sale and Chattel Mortgages Act*, as re-enacted by section 1 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is amended by striking out "agreement or renewal statement" in the first and second lines and inserting in lieu thereof "or agreement" so that the section, exclusive of the clauses, shall read as follows:

Contents
of
documents
required to
be
registered

13. Every mortgage, conveyance or agreement required to be registered under this Act on or after the 1st day of January, 1968, shall, in addition to the other requirements of this Act, contain and legibly set forth at least,

.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. a
amended

(2) Clause *a* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(a) the name and address of the mortgagor or bargainor.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. b,
amended

(3) Clause *b* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(b) The name and address of the mortgagee or bargainee and of his assignee, if any.

Names not
set forth in
full, etc.

(4) A mortgage, conveyance, agreement or renewal statement registered on or after the 1st day of January, 1968, and before the day this section comes into force, is not invalidated nor is its effect destroyed by reason only of a failure to set forth therein in full the name and address of the mortgagor or bargainor or of the mortgagee or bargainee or of his assignee, nor is any such renewal statement invalidated or its effect destroyed by reason only of a failure to set forth therein a description of the goods and chattels mortgaged or sold

SECTION 3. Complementary to section 7 of the Bill.

SECTION 4—Subsection 1. The amendment removes the reference to a renewal statement.

Subsection 2. The amendment removes the requirement that the name and address of the mortgagor or bargainor be set out in full in a mortgage or conveyance.

Subsection 3. Similar to subsection 2 with the appropriate change of wording.

Subsection 4. This is a saving provision; it is complementary to subsections 1, 2 and 3.

SECTION 5. Self-explanatory.

SECTION 6. This section extends the life of chattel mortgages and renewal statements from one year to three years if at the time of registration they are accompanied by a prescribed form of statement.

SECTION 7. The sections added provide for requiring by regulation that when instruments are registered they be accompanied by a statement in such form as the regulations may prescribe; ancillary regulation-making powers are conferred.

sufficient to identify them or to set forth the terms and conditions of the mortgage, conveyance or agreement, unless in the opinion of a judge or court such failure is shown to have actually misled some person whose interests are affected by the mortgage, conveyance, agreement or renewal statement and in such case the judge or court may make such order as the judge or court considers appropriate.

5. Section 35 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 35, as re-enacted by section 2 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is amended by (1967, c. 8, s. 2), amended adding at the end thereof "and, in connection with conveyances, to the fees prescribed by the regulations made under this Act", so that the section shall read as follows:

35. The clerk is entitled for services under this Act in Fees connection with chattel mortgages to the fees prescribed by the regulations made under *The Personal Property Security Act, 1967*, 1967, c. 73 and, in connection with conveyances, to the fees prescribed by the regulations made under this Act.

6. Section 36 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 36, as enacted by section 3 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is repealed and the (1967, c. 8, s. 3), re-enacted following substituted therefor:

36. Notwithstanding anything in this Act, the registration of a chattel mortgage or a renewal statement that at the time the instrument was tendered for registration was accompanied by a statement in the prescribed form, has effect for three years after the date of registration instead of one year as provided by section 24. Registrations are for 3 years when accompanied by prescribed form of statement

7. *The Bills of Sale and Chattel Mortgages Act* is amended R.S.O. 1960, c. 34, amended by adding thereto the following sections:

37. Where required by the regulations made under this Act,

(a) a mortgage or conveyance; or

(b) an assignment, renewal or discharge of a mortgage,

shall, when tendered for registration as provided by this Act, be accompanied by a statement that sets forth on the prescribed form the information prescribed by the regulations. When instrument tendered for registration to be accompanied by statement

38. The Lieutenant Governor in Council may make regulations,

- (a) prescribing additional duties of the clerks of the county and district courts in connection with the registration of documents under this Act;
- (b) requiring or permitting a statement to accompany any instrument tendered for registration under this Act, prescribing the information to be contained in such statement and the manner of recording such information, and for requiring that the forms of statements to be used shall be those provided or approved by the registrar;
- (c) providing for the approval by the registrar of the forms of statements to accompany documents tendered for registration under this Act, and for the withdrawal by the registrar of any such approval;
- (d) requiring the payment of fees and prescribing the amounts thereof;
- (e) providing that clause *d* of section 27 of *The Interpretation Act* does not apply to a prescribed form;
- (f) defining any expression used in the regulations;
- (g) respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act.

R.S.O. 1960,
c. 191

1967, c. 8
s. 5, subs. 3,
repealed

8. Subsection 3 of section 5 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is repealed.

Commence-
ment

9.—(1) This Act, except section 5, comes into force on the day it receives Royal Assent.

Idem

(2) Section 5 comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

10. This Act may be cited as *The Bills of Sale and Chattel Mortgages Amendment Act, 1970*.

SECTION 8. See note to section 6; it is complementary.

An Act to amend The Bills of Sale
and Chattel Mortgages Act

1st Reading

February 27th, 1970

2nd Reading

3rd Reading

Mr. WISHART

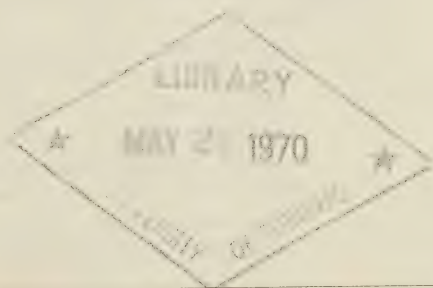
BILL 4

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to amend The Bills of Sale and Chattel Mortgages Act

MR. WISHART

(Reprinted as amended by the Committee of the Whole House)



EXPLANATORY NOTES

The primary purpose of this Bill is to provide for requiring by regulation that when instruments are tendered for registration under the Act they be accompanied by a statement in a prescribed form, in order to make possible the assimilation of the necessary information into the central office of the registration system to be established under *The Personal Property Security Act, 1967*. Since the registration system will make use of automatic data processing equipment information must be presented in a fixed format for ready conversion into machine-readable language.

Certain other transitional provisions are added to the Act.

SECTION 1—Subsection 1. Self-explanatory.

Subsection 2. The reference to the Provincial Secretary is changed to a reference to the Minister of Financial and Commercial Affairs in accordance with administrative procedure.

SECTION 2. The new section added provides that where a mortgage is made out of Ontario and the goods and chattels are brought into Ontario the mortgage is subject to the Act and a true copy may be registered in lieu of the original mortgage.

BILL 4

1970

An Act to amend The Bills of Sale and Chattel Mortgages Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Section 1 of *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following clauses: R.S.O. 1960,
c. 34, s. 1,
amended

(da) “prescribed form” means a form provided or approved under this Act by the registrar;

(db) “registrar” means the registrar of personal property security appointed under *The Personal Property Security Act, 1967*; 1967, c. 73

(2) The said section 1 is further amended by adding thereto the following subsection: R.S.O. 1960,
c. 34, s. 1,
amended

(2) Any reference in this Act to the Provincial Secretary shall be deemed to be a reference to the Minister of Financial and Commercial Affairs. Reference to
Provincial
Secretary

2. *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following section: R.S.O. 1960,
c. 34,
amended

5a.—(1) Where a mortgage has been made out of Ontario with reference to goods and chattels not then in Ontario which if made in Ontario with reference to goods and chattels in Ontario would come within this Act and the goods and chattels are brought into Ontario, the mortgage is subject to this Act, but the period for registering in the office of the clerk of the county or district court of the county or district to which the property mortgaged is brought is within sixty days after the date on which the goods and chattels are brought into Ontario, and a true copy of the mortgage may be registered in lieu of the original thereof. Mortgage
made out of
Ontario and
goods sub-
sequently
brought into
Ontario

Idem

(2) A mortgage may be registered under subsection 1 notwithstanding it does not comply with the provisions of,

(a) section 4, relating to affidavits of execution and *bona fides*; or

(b) section 13, relating to the contents of the mortgage.

R.S.O. 1960,
c. 34, s. 9,
amended

3. Section 9 of *The Bills of Sale and Chattel Mortgages Act* is amended by inserting after "therein" in the second line "or in any prescribed form relating thereto", so that the section shall read as follows:

When
defects not
to invalidate

9. A mortgage or conveyance is not invalidated by reason only of clerical errors or omissions therein or in any prescribed form relating thereto or in the affidavits of execution and *bona fides* unless such errors or omissions are calculated to mislead or deceive or have the effect of misleading or deceiving.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1),
amended

4.—(1) Section 13 of *The Bills of Sale and Chattel Mortgages Act*, as re-enacted by section 1 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is amended by striking out "agreement or renewal statement" in the first and second lines and inserting in lieu thereof "or agreement" so that the section, exclusive of the clauses, shall read as follows:

Contents
of
documents
required to
be
registered

13. Every mortgage, conveyance or agreement required to be registered under this Act on or after the 1st day of January, 1968, shall, in addition to the other requirements of this Act, contain and legibly set forth at least,

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. a
amended

(2) Clause *a* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(a) the name and address of the mortgagor or bargainor.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. b,
amended

(3) Clause *b* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(b) The name and address of the mortgagee or bargainee and of his assignee, if any.

Names not
set forth in
full, etc.

(4) A mortgage, conveyance, agreement or renewal statement registered on or after the 1st day of January, 1968, and before the day this section comes into force, is not invalidated

SECTION 3. Complementary to section 7 of the Bill.

SECTION 4—Subsection 1. The amendment removes the reference to a renewal statement.

Subsection 2. The amendment removes the requirement that the name and address of the mortgagor or bargainor be set out in full in a mortgage or conveyance.

Subsection 3. Similar to subsection 2 with the appropriate change of wording.

Subsection 4. This is a saving provision; it is complementary to subsections 1, 2 and 3.

SECTION 5. Self-explanatory.

SECTION 6. This section extends the life of chattel mortgages and renewal statements from one year to three years if at the time of registration they are accompanied by a prescribed form of statement.

SECTION 7. The sections added provide for requiring by regulation that when instruments are registered they be accompanied by a statement in such form as the regulations may prescribe; ancillary regulation-making powers are conferred.

nor is its effect destroyed by reason only of a failure to set forth therein in full the name and address of the mortgagor or bargainor or of the mortgagee or bargainee or of his assignee, nor is any such renewal statement invalidated or its effect destroyed by reason only of a failure to set forth therein a description of the goods and chattels mortgaged or sold sufficient to identify them or to set forth the terms and conditions of the mortgage, conveyance or agreement, unless in the opinion of a judge or court such failure is shown to have actually misled some person whose interests are affected by the mortgage, conveyance, agreement or renewal statement and in such case the judge or court may make such order as the judge or court considers appropriate.

5. Section 35 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 35, as re-enacted by section 2 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, (1967, c. 8, s. 2), is amended by adding at the end thereof "and, in connection with conveyances, to the fees prescribed by the regulations made under this Act", so that the section shall read as follows:

35. The clerk is entitled for services under this Act in Fees connection with chattel mortgages to the fees prescribed by the regulations made under *The Personal Property Security Act, 1967*, c. 73, and, in connection with conveyances, to the fees prescribed by the regulations made under this Act.

6. Section 36 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 36, as enacted by section 3 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, (1967, c. 8, s. 3), is repealed and the re-enacted following substituted therefor:

36. Notwithstanding anything in this Act, the registration of a chattel mortgage or a renewal statement that at the time the instrument was tendered for registration was accompanied by a statement in the prescribed form, has effect for three years after the date of registration instead of one year as provided by section 24. Registrations are for 3 years when accompanied by prescribed form of statement

7. *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following sections: R.S.O. 1960, c. 34, amended

37. Where required by the regulations made under this Act, When instrument tendered for registration to be accompanied by statement

(a) a mortgage or conveyance; or

(b) an assignment, renewal or discharge of a mortgage,

shall, when tendered for registration as provided by this Act, be accompanied by a statement that sets forth on the prescribed form the information prescribed by the regulations.

Regulations

38. The Lieutenant Governor in Council may make regulations,

- (a) prescribing additional duties of the clerks of the county and district courts in connection with the registration of documents under this Act;
- (b) requiring or permitting a statement to accompany any instrument tendered for registration under this Act, prescribing the information to be contained in such statement and the manner of recording such information, and for requiring that the forms of statements to be used shall be those provided or approved by the registrar;
- (c) providing for the approval by the registrar of the forms of statements to accompany documents tendered for registration under this Act, and for the withdrawal by the registrar of any such approval;
- (d) requiring the payment of fees and prescribing the amounts thereof;
- (e) providing that clause *d* of section 27 of *The Interpretation Act* does not apply to a prescribed form;
- (f) defining any expression used in the regulations;
- (g) respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act.

R.S.O. 1960,
c. 191

1967, c. 8
s. 5, subs. 3,
repealed

8. Subsection 3 of section 5 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is repealed.

Commence-
ment

9.—(1) This Act, except section 5, comes into force on the day it receives Royal Assent.

Idem

(2) Section 5 comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

10. This Act may be cited as *The Bills of Sale and Chattel Mortgages Amendment Act, 1970*.

SECTION 8. See note to section 6; it is complementary.

An Act to amend The Bills of Sale
and Chattel Mortgages Act

1st Reading

February 27th, 1970

2nd Reading

March 10th, 1970

3rd Reading

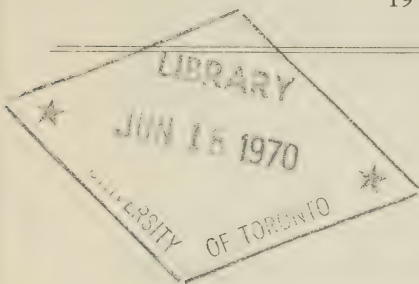
MR. WISHART

(Reprinted as amended by the
Committee of the Whole House)

BILL 4

Government
Publications

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Bills of Sale and Chattel Mortgages Act

MR. WISHART

TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

BILL 4

1970

**An Act to amend
The Bills of Sale and Chattel Mortgages Act**

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1.—(1) Section 1 of *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following clauses: R.S.O. 1960,
c. 34, s. 1,
amended

(da) “prescribed form” means a form provided or approved under this Act by the registrar;

(db) “registrar” means the registrar of personal property security appointed under *The Personal Property Security Act, 1967*; 1967, c. 73

(2) The said section 1 is further amended by adding thereto the following subsection: R.S.O. 1960,
c. 34, s. 1,
amended

(2) Any reference in this Act to the Provincial Secretary shall be deemed to be a reference to the Minister of Financial and Commercial Affairs. Reference to
Provincial
Secretary

2. *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following section: R.S.O. 1960,
c. 34,
amended

5a.—(1) Where a mortgage has been made out of Ontario with reference to goods and chattels not then in Ontario which if made in Ontario with reference to goods and chattels in Ontario would come within this Act and the goods and chattels are brought into Ontario, the mortgage is subject to this Act, but the period for registering in the office of the clerk of the county or district court of the county or district to which the property mortgaged is brought is within sixty days after the date on which the goods and chattels are brought into Ontario, and a true copy of the mortgage may be registered in lieu of the original thereof. Mortgage
made out of
Ontario and
goods sub-
sequently
brought into
Ontario

Idem

(2) A mortgage may be registered under subsection 1 notwithstanding it does not comply with the provisions of,

(a) section 4, relating to affidavits of execution and *bona fides*; or

(b) section 13, relating to the contents of the mortgage.

R.S.O. 1960,
c. 34, s. 9,
amended

3. Section 9 of *The Bills of Sale and Chattel Mortgages Act* is amended by inserting after "therein" in the second line "or in any prescribed form relating thereto", so that the section shall read as follows:

When
defects not
to invalidate

9. A mortgage or conveyance is not invalidated by reason only of clerical errors or omissions therein or in any prescribed form relating thereto or in the affidavits of execution and *bona fides* unless such errors or omissions are calculated to mislead or deceive or have the effect of misleading or deceiving.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1),
amended

4.—(1) Section 13 of *The Bills of Sale and Chattel Mortgages Act*, as re-enacted by section 1 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is amended by striking out "agreement or renewal statement" in the first and second lines and inserting in lieu thereof "or agreement" so that the section, exclusive of the clauses, shall read as follows:

Contents
of
documents
required to
be
registered

13. Every mortgage, conveyance or agreement required to be registered under this Act on or after the 1st day of January, 1968, shall, in addition to the other requirements of this Act, contain and legibly set forth at least,

.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. a
amended

(2) Clause *a* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(a) the name and address of the mortgagor or bargainor.

R.S.O. 1960,
c. 34, s. 13
(1967, c. 8,
s. 1), cl. b,
amended

(3) Clause *b* of the said section 13 is amended by striking out "full" in the first line, so that the clause shall read as follows:

(b) The name and address of the mortgagee or bargainee and of his assignee, if any.

Names not
set forth in
full, etc.

(4) A mortgage, conveyance, agreement or renewal statement registered on or after the 1st day of January, 1968, and before the day this section comes into force, is not invalidated

nor is its effect destroyed by reason only of a failure to set forth therein in full the name and address of the mortgagor or bargainor or of the mortgagee or bargainee or of his assignee, nor is any such renewal statement invalidated or its effect destroyed by reason only of a failure to set forth therein a description of the goods and chattels mortgaged or sold sufficient to identify them or to set forth the terms and conditions of the mortgage, conveyance or agreement, unless in the opinion of a judge or court such failure is shown to have actually misled some person whose interests are affected by the mortgage, conveyance, agreement or renewal statement and in such case the judge or court may make such order as the judge or court considers appropriate.

5. Section 35 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 35, as re-enacted by section 2 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, (1967, c. 8, s. 2), is amended by adding at the end thereof "and, in connection with conveyances, to the fees prescribed by the regulations made under this Act", so that the section shall read as follows:

35. The clerk is entitled for services under this Act in connection with chattel mortgages to the fees prescribed by the regulations made under *The Personal Property Security Act, 1967*, 1967, c. 73, and, in connection with conveyances, to the fees prescribed by the regulations made under this Act. Fees

6. Section 36 of *The Bills of Sale and Chattel Mortgages Act*, R.S.O. 1960, c. 34, s. 36, as enacted by section 3 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, (1967, c. 8, s. 3), is repealed and the following substituted therefor: re-enacted

36. Notwithstanding anything in this Act, the registration of a chattel mortgage or a renewal statement that at the time the instrument was tendered for registration was accompanied by a statement in the prescribed form, has effect for three years after the date of registration instead of one year as provided by section 24. Registrations are for 3 years when accompanied by prescribed form of statement

7. *The Bills of Sale and Chattel Mortgages Act* is amended by adding thereto the following sections: R.S.O. 1960, c. 34, amended

37. Where required by the regulations made under this Act, When instrument tendered for registration to be accompanied by statement

- (a) a mortgage or conveyance; or
- (b) an assignment, renewal or discharge of a mortgage,

shall, when tendered for registration as provided by this Act, be accompanied by a statement that sets forth on the prescribed form the information prescribed by the regulations.

Regulations

38. The Lieutenant Governor in Council may make regulations,

- (a) prescribing additional duties of the clerks of the county and district courts in connection with the registration of documents under this Act;
- (b) requiring or permitting a statement to accompany any instrument tendered for registration under this Act, prescribing the information to be contained in such statement and the manner of recording such information, and for requiring that the forms of statements to be used shall be those provided or approved by the registrar;
- (c) providing for the approval by the registrar of the forms of statements to accompany documents tendered for registration under this Act, and for the withdrawal by the registrar of any such approval;
- (d) requiring the payment of fees and prescribing the amounts thereof;
- (e) providing that clause *d* of section 27 of *The Interpretation Act* does not apply to a prescribed form;
- (f) defining any expression used in the regulations;
- (g) respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act.

R.S.O. 1960,
c. 191

1967, c. 8
s. 5, subs. 3,
repealed

8. Subsection 3 of section 5 of *The Bills of Sale and Chattel Mortgages Amendment and Repeal Act, 1967*, is repealed.

Commence-
ment

9.—(1) This Act, except section 5, comes into force on the day it receives Royal Assent.

Idem

(2) Section 5 comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

10. This Act may be cited as *The Bills of Sale and Chattel Mortgages Amendment Act, 1970*.

An Act to amend The Bills of Sale
and Chattel Mortgages Act

1st Reading

February 27th, 1970

2nd Reading

March 10th, 1970

3rd Reading

May 26th, 1970

MR. WISHART

BILL 5

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to amend The Proceedings Against the Crown Act, 1962-63

MR. WISHART



EXPLANATORY NOTE

The amendment extends the application of the Act to actions in division court.

BILL 5

1970

An Act to amend The Proceedings Against the Crown Act, 1962-63

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Clause *e* of subsection 2 of section 2 of *The Proceedings Against the Crown Act, 1962-63* is amended by striking out ^{1962-63, c. 109, s. 2, subs. 2, cl. *e*, amended} “*The Division Courts Act* or” in the first and second lines, so that the clause shall read as follows:

(*e*) authorizes proceedings against the Crown under *The Master and Servant Act.* R.S.O. 1960, c. 230

2. *The Proceedings Against the Crown Act, 1962-63* is ^{1962-63, c. 109, amended} amended by adding thereto the following section:

8*a*. Except as otherwise provided in this Act and subject ^{Proceedings in division courts} to any enactment limiting the jurisdiction of division courts, proceedings against the Crown may be instituted in a division court and proceeded with in accordance with *The Division Courts Act* and the ^{R.S.O. 1960, c. 110} rules thereunder.

3. This Act comes into force on the day it receives Royal ^{Commence-ment} Assent.

4. This Act may be cited as *The Proceedings Against the Crown Amendment Act, 1970.* ^{Short title}

An Act to amend
The Proceedings Against the Crown Act,
1962-63

1st Reading

February 27th, 1970

2nd Reading

3rd Reading

MR. WISHART

BILL 5

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

**An Act to amend
The Proceedings Against the Crown Act, 1962-63**

Mr. WISHART



TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

BILL 5

1970

An Act to amend The Proceedings Against the Crown Act, 1962-63

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Clause *e* of subsection 2 of section 2 of *The Proceedings Against the Crown Act, 1962-63* is amended by striking out "*The Division Courts Act* or" in the first and second lines, ^{1962-63, c. 109, s. 2, subs. 2, cl. *e*, amended} so that the clause shall read as follows:

(*e*) authorizes proceedings against the Crown under *The Master and Servant Act*. R.S.O. 1960, c. 230

2. *The Proceedings Against the Crown Act, 1962-63* is ^{1962-63, c. 109, amended} amended by adding thereto the following section:

8a. Except as otherwise provided in this Act and subject ^{Proceedings in division courts} to any enactment limiting the jurisdiction of division courts, proceedings against the Crown may be instituted in a division court and proceeded with in accordance with *The Division Courts Act* and the ^{R.S.O. 1960, c. 110} rules thereunder.

3. This Act comes into force on the day it receives Royal ^{Commence-} Assent. ment

4. This Act may be cited as *The Proceedings Against the Crown Amendment Act, 1970*. Short title

An Act to amend
The Proceedings Against the Crown Act,
1962-63

1st Reading

February 27th, 1970

2nd Reading

March 10th, 1970

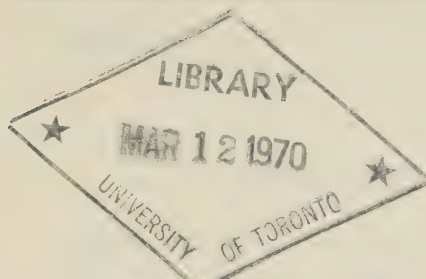
3rd Reading

March 18th, 1970

Mr. WISHART

BILL 6

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Public Trustee Act

MR WISHART

TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

EXPLANATORY NOTE

The amendment enlarges the securities in which the Public Trustee may invest money he holds. At present, his investments are confined to securities issued or guaranteed by the Government of Ontario or Canada.

BILL 6

1970

An Act to amend The Public Trustee Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. Section 13 of *The Public Trustee Act* is repealed and the following substituted therefor: R.S.O. 1960,
c. 334, s. 13,
re-enacted

13. Any money that is available for investment by the Public Trustee shall be invested in investments in which the Treasurer of Ontario and Minister of Economics may invest public money under section 20 of *The Financial Administration Act*. Investment
of money

R.S.O. 1960,
c. 142

2. This Act comes into force on the day it receives Royal Assent. Commence-
ment

3. This Act may be cited as *The Public Trustee Amendment Act, 1970*. Short title

An Act to amend
The Public Trustee Act

1st Reading

February 27th, 1970

2nd Reading

3rd Reading

MR. WISHART

BILL 6

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to amend The Public Trustee Act

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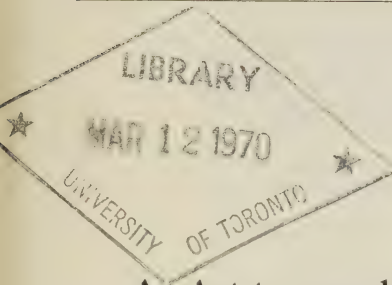
April 22nd, 1970

MR. WISHART

A20N
B
356

BILL 7

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970



An Act to consolidate and revise The Law Society Act

MR. WISHART

EXPLANATORY NOTES

The purpose of this Bill is to consolidate and revise *The Law Society Act*, the parts of *The Barristers Act* and the parts of *The Solicitors Act* that deal with barristers and solicitors respectively as members of the Law Society, thus bringing into one Act in up-to-date form all the statutory provisions that govern the Law Society and its members.

These Acts have not been revised since 1912 and are now in many respects out of date.

There are three complementary Bills:

1. Bill 000, *An Act to amend The Solicitors Act*.
2. Bill 000, *An Act to amend The Barristers Act*.
3. Bill 000, *An Act to amend The Notaries Act, 1962-63*.

Attention is drawn to the following highlights in this Bill:

1. The Law Society of Upper Canada is continued as a corporation with that name but, instead of the corporation having only the Treasurer and the other benchers as members, all members of the Society (i.e. all lawyers) will be members of the corporation. See section 2.
2. A new provision will require annual meetings of the members to be held. See section 3.
3. The Law Society is subject to *The Corporations Act* by reason of the provisions of the latter. There are two exceptions to this general rule expressly made in section 6 of this Bill. Section 75a of *The Corporations Act* deals with proxies and section 326 authorizes the Lieutenant Governor to terminate for cause the existence of a corporation.
4. Section 10 is new. It is exactly the same in principle as section 6 of *The Professional Engineers Act, 1968-69* and section 30 of *The Surveyors Act, 1968-69*.
5. The provisions with respect to honorary benchers are unchanged in principle. See section 12.
6. The provisions respecting *ex officio* benchers are changed in principle as follows:
 - (1) All present *ex officio* benchers are continued. See section 17.
 - (2) In 1971 all *ex officio* benchers lose their right to vote in Convocation and in committee except former Treasurers who retain these rights until they reach the age of seventy-five. See sections 13 (2) and 14.
 - (3) Those who are elected as benchers at four elections and who serve for sixteen years become *ex officio* benchers, or, if they so choose, they may stand for re-election. See section 13 (1) and section 13 (3).
7. The responsibilities and powers of the Minister of Justice and Attorney General in his capacity as an *ex officio* bencher are spelled out. See section 14.

8. Starting in 1971, a general election of benchers will be held every four years instead of every five years. See section 16 (1).
9. Starting in 1971, forty benchers will be elected instead of thirty. See section 16 (1).
10. With reference to the election of benchers, twenty are to be elected from within Metropolitan Toronto and twenty from outside. Almost exactly one-half of the profession have their addresses on the Law Society's records in Metropolitan Toronto and in order to carry on the work of the Law Society, particularly the work of the Discipline Committee, it is necessary that approximately one-half of the benchers be readily available for meetings. It is considered to be equally important that at least one-half of the elected benchers should be from outside Metropolitan Toronto. The rules will provide for two separate ballots, one for the twenty benchers to be elected from within Metropolitan Toronto and one for the twenty benchers to be elected from outside Metropolitan Toronto. All members of the profession will be at liberty to vote on each ballot as it is felt that the benchers should be elected by the profession as a whole. See section 16 (2, 3).
11. The composition of a quorum is restricted to benchers who are present and entitled to vote. See section 25.
12. A Law Society Council is created, comprising representatives of the Law Society, of the county and district law associations, of the Canadian Bar Association, of the faculties of the law schools in Ontario, of the junior bar, and of the student members, together with three persons who are not members of the Law Society to be appointed by the Lieutenant Governor in Council. This Council will consider policy matters affecting the legal profession as a whole and the manner in which the members generally are discharging their obligations to the public. See section 27.
13. A number of basic provisions respecting admission to the Society, heretofore in the rules, are transferred to the Act. See section 28.
14. The status of the members of the Society as such is clarified and up-dated. See section 29.
15. The status of lawyers as officers of the courts is extended and clarified. See section 30.
16. The position of members of the Society who are appointed to judicial office is clarified. See section 32.
17. A number of basic provisions respecting discipline, heretofore in the rules, are transferred to and extended in the Act. See sections 34, 35.
18. The governing body is authorized to suspend the membership of any lawyer who is found after due inquiry to be incapable of practising law by reason of age, physical or mental illness, including addiction to alcohol or drugs, or other cause. See section 36.
19. An appeal from the discipline committee to Convocation is provided in minor disciplinary matters. See section 40. Sub-section 4 disqualifies committee members who took part in the original proceedings from taking part in the appeal.
20. A new provision authorizes the Society to reimburse a member who has been subjected to unwarranted disciplinary proceedings for his costs. See section 42.
21. Provision is made for the appointment of a trustee in proper cases temporarily to carry on and wind up the practice of a member of the Society who is disbarred, dies, has absconded, or is incapacitated as a consequence of which he is unable to practise, or where his practice is neglected. See section 44.

22. A general right of appeal to the Court of Appeal is provided from all disciplinary decisions of Convocation and decisions refusing admission, etc. See section 45.
23. A new subsection provides for a stay of a decision or order appealed against pending the disposition of the appeal. See section 46 (2).
24. A new subsection is designed to clarify the Society's right to reimbursement from a bankrupt's estate in compensation cases. See section 52 (9).
25. A new section provides for indemnity for professional liability. See section 54.
26. The rule-making powers of the governing body are clarified and up-dated. See section 55.
27. A rule is authorized under which out-of-Ontario lawyers may be allowed to appear occasionally in the courts of Ontario. See section 55 (1), par. 26.
28. Matters of concern to the public are taken out of the rules and made matters for regulations, which are not effective unless approved by the Lieutenant Governor in Council. These regulations will come under *The Regulations Act* and therefore must be filed with the Registrar of Regulations and published in *The Ontario Gazette*. See section 56.

In preparing this revision most of the applicable recommendations of the Royal Commission Inquiry into Civil Rights with respect to self-governing bodies have been adopted.

Although the likelihood of inaccuracies occurring in a tabular summary such as follows is obvious because of over-simplification, it may perhaps be said that four of the thirty-one recommendations of the McRuer Report are not in any way applicable to the subject-matter of this Bill. Of the remaining twenty-seven recommendations, twenty-three are adopted (five with additions, variations, in part, etc.) and four are not adopted.

<u>McRuer Recommendation</u>	<u>Section of Bill</u>
(Vol. 3, pp. 1209-1211)	
1. Not applicable.	
2. Not adopted, but see ss. 14 and 27.	
3. Not applicable.	
4. Not adopted.	ss. 29 (b) (c), 33
5. Adopted with variation.	s. 9
6. Adopted.	s. 40 (4)
7. Not applicable.	
8. Adopted with variation.	ss. 35, 38, 39.
9. Adopted.	s. 56 par. 4
10. Adopted.	s. 34 (13)
11. Adopted.	s. 34 (3)
12. Adopted.	s. 34 (4)

- | | |
|---|--------------|
| 13. Adopted. | s. 34 (8) |
| 14. This principle now followed;
will be continued. | |
| 15. Adopted as to counsel; not
adopted as to agent. | s. 34 (6) |
| 16. Adopted. | ss. 35–39 |
| 17. This principle now followed;
no change contemplated. | |
| 18. Adopted. | s. 51 (2) |
| 19. First part, not adopted;
second part, adopted. | s. 41 |
| 20. Adopted. | s. 42 |
| 21. Adopted with variation. | s. 46 (2) |
| 22. Adopted. | s. 28 (3) |
| 23. Adopted. | ss. 40, 45. |
| 24. Will be adopted. | |
| 25. Adopted. | s. 56 par. 1 |
| 26. Adopted. | s. 55 |
| 27. Adopted, but see s. 56 par. 6. | |
| 28. Adopted so far as practicable. | |
| 29. Not adopted. | |
| 30. Not adopted. | |
| 31. Not applicable. | |

BILL 7

1970

An Act to consolidate and revise The Law Society Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,

Interpre-
tation

- (a) "bencher" means a bencher of the Society;
- (b) "Convocation" means a general or special meeting of the benchers convened for the purpose of transacting business of the Society;
- (c) "member" means a member of the Society and includes a life member but does not include an honorary member or a student member;
- (d) "regulations" means the regulations made under this Act;
- (e) "rules" means the rules made under this Act;
- (f) "Secretary" means the Secretary of the Society;
- (g) "Society" means The Law Society of Upper Canada;
- (h) "Treasurer" means the Treasurer of the Society.
R.S.O. 1960, c. 207, s. 1, *amended*.

THE SOCIETY

2. The Law Society of Upper Canada authorized to be established by an Act of the Parliament of Upper Canada passed in the thirty-seventh year of the reign of his late Majesty George III and incorporated by an Act of the Parliament of Upper Canada passed in the second year of the reign of his late Majesty George IV is hereby continued as a corporation without share capital composed of the Treasurer, the benchers and the other members from time to time.
R.S.O. 1960, c. 207, s. 2, *part, amended*.

Society
continued
1797, c. 13
1822, c. 5

Annual
meeting

3. A meeting of the members shall be held annually at such place and at such time as is determined from time to time in Convocation, notice of which shall be given by publication as provided by the rules. *New.*

Seat

4. The permanent seat of the Society shall continue to be at Osgoode Hall in the City of Toronto. *New.*

Acquisition
and
disposition
of property

5.—(1) The Society may purchase, acquire, take by gift, bequest, devise, donation, or otherwise any real or personal property for its purposes, and it may hold, sell, mortgage, lease, or dispose of any of its real or personal property. R.S.O. 1960, c. 207, s. 2, *amended.*

Trustee
powers

(2) The Society has and may exercise all powers of trustees under the laws of Ontario.

Borrowing
power

(3) The Society may borrow money for its purposes. *New.*

R.S.O. 1960,
c. 71,
ss. 75a, 326
not to apply

6.—(1) Sections 75a and 326 of *The Corporations Act* do not apply to the Society.

Conflict

(2) In the event of conflict between any provision of this Act and any provision of *The Corporations Act*, the provision of this Act prevails. *New.*

Treasurer

7. The Treasurer is the president and head of the Society. *New.*

Secretary

8. The Secretary is the chief administrative officer of the Society. *New.*

Secretary,
etc., to be
Canadian
citizen

9. The Secretary, deputy secretaries, assistant secretaries and other officers of the Society shall be Canadian citizens or other British subjects. *New.*

Liability
of benchers,
officers and
employees

10. No action or other proceedings for damages shall be instituted against the Treasurer or any bencher, official of the Society, or person appointed in Convocation for any act done in good faith in the performance or intended performance of any duty or in the exercise or in the intended exercise of any power under this Act, a regulation or a rule, or for any neglect or default in the performance or exercise in good faith of any such duty or power. *New.*

BENCHERS

Government
of the
Society

11. The benchers shall govern the affairs of the Society, including the call of persons to practise at the bar of the courts of Ontario and their admission and enrolment to practise as solicitors in Ontario. *New.*

Honorary
benchers

12. Every person,

(a) who is an honorary bencher on the day this Act comes into force; or

(b) who after that day is made an honorary bencher,
is an honorary bencher but as such has only the rights and
privileges prescribed by the rules. *New.*

13.—(1) The following, if and while they are members, are ^{*Ex officio*}
ex officio benchers:

1. The Minister of Justice and Attorney General for Canada.
2. The Solicitor General for Canada.
3. The Minister of Justice and Attorney General for Ontario and every person who has held that office or the office of Attorney General for Ontario.
4. Every retired judge of the Supreme Court of Canada or of the Exchequer Court of Canada who was at the time of his appointment a member of the bar of Ontario and who became an *ex officio* bencher under paragraph 5 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964. ^{R.S.O. 1960, c. 207}
5. Every retired judge of the Supreme Court of Ontario who became an *ex officio* bencher under paragraph 6 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964.
6. Every person who was elected a bencher at four quinquennial elections and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as that paragraph was before it was re-enacted in 1964.
7. Every person who was elected a bencher at three quinquennial elections and served as a bencher for fifteen years and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as re-enacted in 1964. 1964, c. 54, s. 1, *amended*.
8. Every person who is elected a bencher at three elections and serves as a bencher for fifteen years before the election in 1975. *New.*
9. Every person who is elected a bencher at four elections and who serves as a bencher for sixteen years. 1964, c. 54, s. 1 (2), *part, amended*.

(2) An *ex officio* bencher under subsection 1 has all the rights and privileges prescribed by the rules, except that after the election of benchers in 1971 he no longer shall have the right to vote in Convocation or in a committee of benchers. *New.* ^{Rights and privileges}

Option

(3) An elected benchner who becomes qualified as an *ex officio* benchner under subsection 1 may, if he chooses, continue as an elected benchner and is eligible to be re-elected in any subsequent election of benchners without prejudice to his right to become an *ex officio* benchner at any time so long as he is still an elected benchner. *New.*

Minister of
Justice,
guardian of
the public
interest

14.—(1) The Minister of Justice and Attorney General for Ontario in his capacity as an *ex officio* benchner shall serve as the guardian of the public interest in all matters within the scope of this Act or having to do with the legal profession in any way, and for this purpose he may at any time require the production of any document, paper, record or thing pertaining to the affairs of the Society.

Protection
of Minister

(2) No person who is or has been the Minister of Justice and Attorney General for Ontario is subject to any disciplinary proceedings of the Society or to any penalty imposed in Convocation or in a committee of benchners for anything done by him while in such office. *New.*

Treasurers
and former
Treasurers
are *ex officio*
benchners

15.—(1) Every member who has been or is elected to the office of Treasurer is an *ex officio* benchner with all the rights and privileges of an elected benchner. 1964, c. 54, s. 1 (2), *part, amended.*

Rights and
privileges

(2) Every *ex officio* benchner under subsection 1 shall, upon attaining the age of seventy-five years, continue to be an *ex officio* benchner with all the rights and privileges prescribed by the rules, except that he no longer shall have the right to vote in Convocation or in a committee of benchners. *New.*

Election of
benchners

16.—(1) An election of benchners shall be held in 1971 and in every fourth year thereafter at each of which forty benchners shall be elected by secret ballot from and by the members in accordance with this Act and the rules. R.S.O. 1960, c. 207, s. 8 (1), *part, amended.*

Area repre-
sentation

(2) Twenty of the forty benchners mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are within The Municipality of Metropolitan Toronto as it is constituted on that day.

Idem

(3) Twenty of the forty benchners mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are outside The Municipality of Metropolitan Toronto as it is constituted on that day. *New.*

17. The benchers elected at the election of benchers in 1966 or thereafter shall continue in office until those elected at the election of benchers in 1971 take office. *New.* Present benchers continue

18. Every member in good standing and not in arrear to the Society for any fee or levy is an elector qualified to vote at an election of benchers. R.S.O. 1960, c. 207, s. 9, *amended.* Who may vote

19. No member is eligible to be a candidate for bencher at any election who is not qualified to vote at the election. R.S.O. 1960, c. 207, s. 11, *amended.* Qualification of candidates

20. Any bencher is eligible for re-election. R.S.O. 1960, c. 207, s. 12, *amended.* Benchers may be re-elected

21. Any member who was qualified to vote at an election of benchers may, in accordance with the rules, petition Convocation against the election of any bencher. R.S.O. 1960, c. 207, s. 30, *part, amended.* Election petitions

22. The elected benchers shall take office at the first general Convocation following their election and, subject to this Act, shall hold office until their successors take office. R.S.O. 1960, c. 207, s. 28, *amended.* Taking office

23. In case of failure to elect the requisite number of qualified benchers or in case of a vacancy, the remaining benchers shall as soon as convenient supply the deficiency in the number of benchers or fill the vacancy by electing in Convocation the requisite number of qualified members as benchers, and the benchers so elected shall, subject to this Act, hold office until their successors take office. R.S.O. 1960, c. 207, s. 34, *amended.* Vacancies

24. The benchers may remove from office any elected bencher who fails to attend six consecutive general Convocations. R.S.O. 1960, c. 207, s. 29 (1), *amended.* Removal for non-attendance

25.—(1) Except as provided by subsection 2, ten benchers present and entitled to vote in Convocation constitute a quorum for the transaction of business. Quorum

(2) No disciplinary matter shall be dealt with in Convocation unless fifteen or more benchers are present and entitled to vote. *New.* Idem, disciplinary matters

26.—(1) The benchers shall annually at the general Convocation in the month of May, or at such other time as the benchers may fix, elect one of their number as Treasurer. Election of Treasurer

(2) The Treasurer is eligible for re-election. R.S.O. 1960, c. 207, s. 33, *amended.* Treasurer eligible for re-election

LAW SOCIETY COUNCIL

Law Society
Council,
duties

27.—(1) There shall be a body known as the “Law Society Council” to consider the manner in which the members of the Society are discharging their obligations to the public and generally matters affecting the legal profession as a whole.

Composition

(2) The Law Society Council shall be composed of,

- (a) the Treasurer;
- (b) the chairman and the vice-chairman of each standing committee of the benchers;
- (c) the vice-president for Ontario of the Canadian Bar Association;
- (d) the president of each county or district law association or his nominee, being a member of his association;
- (e) two members who are full time teachers at law schools in Ontario approved by the Society, to be jointly appointed annually by the deans of such law schools;
- (f) two student members elected annually by the student members attending the teaching period of the Bar Admission Course;
- (g) one member who has been a member of the Society for not more than ten years appointed by the vice-president for Ontario of the Canadian Bar Association; and
- (h) three persons, not being members of the Society, appointed by the Lieutenant Governor in Council for such terms as he sees fit.

Meetings
and report

(3) The Council shall meet at least once a year and shall report at least once a year to the Lieutenant Governor in Council and to Convocation.

Chairman

(4) The first order of business at the first meeting of the Council in any year is to elect a chairman.

Rules

(5) The Council may make such rules, procedural or otherwise, as it considers appropriate for the proper conduct of its affairs.

Cost

(6) The administrative cost and all expenses of the Council shall be borne and paid by the Society. *New.*

ADMISSION OF MEMBERS

28.—(1) Every application for admission to the Society shall be on the prescribed form and be accompanied by the prescribed fees. Form of applications

(2) An applicant for admission to the Society must present satisfactory proof that he is of good character. Good character

(3) No application for admission to the Society shall be refused until the applicant has been given an opportunity to appear in person before a committee of benchers. Appearance before refusal

(4) Where an application for admission to the Society has been refused, another application based on new evidence may be made at any time. *New.* Subsequent applications

CLASSES OF MEMBERS

29. Subject to sections 31, 32, 33, 35, 36, 37 and 39, Classes of members

(a) the persons, honorary members

(i) who are honorary members of the Society on the day this Act comes into force, or

(ii) who after that day are made honorary members of the Society,

are honorary members with only the rights and privileges prescribed by the rules;

(b) the persons, being Canadian citizens or other British subjects, life members

(i) who are honorary life members on the day this Act comes into force, or

(ii) who after that day become life members,

are life members with the rights and privileges of members, and such additional rights and privileges as are prescribed by the rules;

(c) the persons, being Canadian citizens or other British subjects, members

(i) who are members on the day this Act comes into force, or

- (ii) who after that day successfully complete the Bar Admission Course and are called to the bar and admitted and enrolled as solicitors, or
- (iii) who after that day transfer from a jurisdiction outside Ontario and are called to the bar and admitted and enrolled as solicitors,

are members and entitled to practise law in Ontario as barristers and solicitors;

student
members

(d) the persons,

- (i) who are students-at-law in the Bar Admission Course on the day this Act comes into force, or
- (ii) who after that day become students-at-law in the Bar Admission Course,

are student members with the rights and privileges prescribed by the rules. R.S.O. 1960, c. 207, s. 4, *amended*.

Members
are officers
of the
courts

30. Every member is an officer of every court of record in Ontario.

Resignation

31.—(1) A member or student member may make application to resign from the Society, and Convocation may accept the resignation of such member or student member whereupon all his rights and privileges as a member or student member, as the case may be, cease.

Re-
admission

(2) Any former member or student member may make application for readmission as a member or student member, as the case may be, and Convocation may readmit such former member or student member. *New.*

Effect of
appoint-
ment to
Bench

32. The membership of any member or former member who has assumed office or hereafter assumes office as,

- (a) a full-time judge under any Act of the Parliament of Canada; or
- (b) a full-time judge under *The Provincial Courts Act, 1968* or *The Division Courts Act*; or

1968, c. 103
R.S.O. 1960,
c. 110

- (c) the Senior Master or a full-time master or a full-time assistant master or a full-time local master of the Supreme Court or a full-time taxing officer,

is, while he continues in any such office, in abeyance, and, upon his ceasing to hold such office, shall be restored by his giving notice in writing to such effect to the Secretary. *New.*

33.—(1) When a member ceases to be a Canadian citizen or other British subject, he ceases to be a member. Effect of losing Canadian citizenship

(2) Any person whose membership terminated under sub-section 1 may, upon again becoming a Canadian citizen or other British subject, make application for readmission as a member and Convocation may readmit him. *New.* Re-admission

DISCIPLINE

34.—(1) No disciplinary action under section 35, 36, 38 or 39 shall be taken unless, Complaint and hearing

(a) a complaint under oath has been filed in the office of the Secretary and a copy thereof has been served on the person whose conduct is being investigated;

(b) the person whose conduct is being investigated has been served with a notice of the time and place of the hearing; and

(c) a committee of benchers has heard evidence of or on behalf of the complainant and, if the person whose conduct is being investigated appears at the hearing and so requests, has heard his evidence and any evidence on his behalf and has reached the decision that he is guilty.

(2) Any person presiding at a hearing may administer oaths to witnesses and require them to give evidence under oath. Power to take sworn evidence

(3) If the person whose conduct is being investigated fails to appear in answer to the notice at the time and place appointed, the hearing may be conducted in his absence. Failure to appear

(4) Hearings shall be held *in camera*, but if the person whose conduct is being investigated requests otherwise by a notice in writing delivered to the Secretary before the day fixed for the hearing, the committee may conduct the hearing in public or otherwise as it considers proper. Disciplinary hearings to be held in camera

Adjourn-
ments

(5) A hearing may be adjourned at any time and from time to time.

Attendance
of person
being
investigated

(6) A person whose conduct is being investigated, if present in person at the hearing, has the right to be represented by counsel, to adduce evidence and to make submissions, and any such person may be compelled to attend and give evidence in the manner provided in subsection 10.

Examina-
tion and
cross-
examination

(7) At a hearing, the complainant and the person whose conduct is being investigated have the right to examine the witnesses called by them respectively, and to cross-examine the witnesses opposed in interest, including the deponent of an affidavit or a statutory declaration submitted in evidence.

Hearing of
evidence
R.S.O. 1960,
c. 125

(8) The oral evidence submitted at a hearing shall be taken down in writing or by any other method authorized by *The Evidence Act*.

Rules of
evidence

(9) The rules of evidence applicable in civil proceedings are applicable at a hearing, except that an affidavit or statutory declaration of any person is admissible in evidence as *prima facie* proof of the statements made therein.

Summons
to witness

(10) The Treasurer, the chairman or a vice-chairman of a committee of benchers, or the Secretary may, and the Secretary upon application of a person whose conduct is being investigated shall, issue a summons in the prescribed form commanding the attendance and examination of any person as a witness, and the production of any document or thing, the production of which could be compelled at the trial of an action, before the committee of benchers at the time and place mentioned in the summons and stating that failure to obey the summons will render the person liable to imprisonment on an application to the Supreme Court, but the person whose attendance is required is entitled to the like conduct money and payment for expenses and loss of time as upon attendance as a witness at a trial in the Supreme Court.

Failure of
witness to
appear, etc.

(11) If any person,

- (a) on being duly summoned to appear as a witness makes default in attending; or
- (b) being in attendance as a witness refuses to take an oath legally required to be taken, or to produce any document or thing in his power or control legally required to be produced by him, or to answer any question which he is legally required to answer; or
- (c) does any other thing which would, if the committee had been a court of law having power to commit for contempt, have been contempt of that court,

the person presiding at the hearing may certify the offence of that person under his hand to the Supreme Court and the court may thereupon inquire into the alleged offence and after hearing any witnesses who may be produced against or on behalf of the person charged with the offence, and after hearing any submissions that may be offered in defence, punish or take steps for the punishment of that person in the like manner as if he had been guilty of contempt of court.

(12) The decision taken after a hearing shall be in writing ^{Decision} and shall contain or be accompanied by the reasons for the decision in which are set out the findings of fact and the conclusions of law, if any, based thereon, and a copy of the decision and the reasons therefor, together with a notice to the person whose conduct is being investigated of his right of appeal, shall be served upon him within thirty days after the date of the decision.

(13) Any document required to be served under this Act ^{Service of documents} upon a person whose conduct is being investigated shall be served personally upon him or by mailing a copy thereof in a registered letter addressed to him at his last known residence or office address as shown by the records of the Society, and service shall be effected not less than ten days before the date of the hearing or the event or thing required to be done, as the case may be, and proof by affidavit of the service is sufficient. *New.*

35. If a member is found guilty of professional misconduct or of conduct unbecoming a barrister and solicitor after due investigation by a committee of benchers, Convocation may by order cancel his membership in the Society by disbarring him as a barrister and striking his name off the roll of solicitors or may by order suspend his rights and privileges as a member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (1), *amended.* ^{Disbarment, etc., for misconduct}

36. If a member has been found pursuant to any Act to be mentally incompetent or mentally ill, or has been found after due inquiry by a committee of benchers incapable of practising law as a barrister and solicitor by reason of age, physical or mental illness including addiction to alcohol or drugs, or any other cause, Convocation may by order limit or suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *amended.* ^{Suspension for incapacity}

Suspension
for failure
to pay
fees

37. If a member fails to pay any fee or levy payable by him to the Society within four months after the day on which payment was due, Convocation may by order suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *part, amended*.

Reprimand
in committee
for
misconduct

38. If a committee of benchers finds that a member has been guilty of professional misconduct or conduct unbecoming a barrister and solicitor which in its opinion does not warrant disbarment, suspension or reprimand in Convocation, the committee may by order reprimand him. *New*.

Student
members'
misconduct

39. If a student member is found after due inquiry by a committee of benchers guilty of conduct unbecoming a student member, the committee may by order reprimand him or Convocation may by order cancel his student membership or may by order suspend his rights and privileges as a student member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (2), *amended*.

Appeal to
Convocation

40.—(1) Any member who has been found guilty under section 38 or any student member who has been found guilty under section 39 and, in either case, has been ordered to be reprimanded in committee, may appeal from the order of reprimand to Convocation within fifteen days from the day upon which he is served with the order of the committee.

Procedure
and record

(2) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy of the proceedings before the committee, the evidence taken, the committee's report and all decisions, findings and orders of the committee in the matter.

Orders

(3) Upon the hearing of an appeal under this section, Convocation may vary the punishment imposed by the committee or may refer the matter or any part thereof back to a committee with such directions as it considers proper or may make such order as it considers proper in the circumstances.

Disqualifi-
cation

(4) No bencher who sat on the committee of benchers when the order appealed from was made shall take any part in the hearing of the appeal in Convocation.

Decision
final

(5) Subject to section 45, the decision of Convocation under this section is final and not subject to any further appeal. *New*.

41. A person whose membership or student membership has been cancelled or whose rights and privileges as a member or student member have been suspended or who has been reprimanded may be ordered to pay the expense, or part of the expense, incurred by the Society in the investigation or hearing of any complaint in respect of which he has been found guilty. R.S.O. 1960, c. 207, s. 44 (3), *amended*. Expenses of investigations

42. Where it appears that disciplinary proceedings against a member or student member were unwarranted, Convocation may order that such costs as it considers just be paid by the Society to the member or student member whose conduct was the subject of the proceedings. *New*. Costs where disciplinary proceedings unwarranted

43.—(1) If the Treasurer or the Secretary or the chairman or the vice-chairman of any committee of benchers dealing with disciplinary matters has reasonable cause to believe that a member has been or may be guilty of misconduct in connection with any property in his possession or under his control, a judge of the Supreme Court may, upon an *ex parte* application by the Society, order that the property described in the order shall not be paid out or dealt with by the person or persons named in the order without the leave of a judge of the Supreme Court. 1960-61, c. 44, s. 1, *amended*. Stop-orders on members' bank accounts, etc.

(2) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. *New*. Discharge, etc., of stop-orders

44.—(1) Where a member or former member dies, disappears or leaves Ontario or a person's membership in the Society is cancelled or his rights and privileges as a member are suspended and, in any such event, his practice is neglected to the prejudice of any person or no provision has been made for the protection of his clients' interests, a judge of the Supreme Court may, upon an *ex parte* application by the Society, by order appoint a person as trustee, with or without bond, to take possession of any property in the possession of or under the control of such member or former member for the purpose of preserving, carrying on or winding up the practice of such member or former member. Appointment of trustees

(2) A person appointed under subsection 1 shall, in respect of any trust property of such member or former member, be the trustee thereof, and he shall in respect thereof take the place of the personal representative, committee or other representative, if any, of such member or former member. Idem

(3) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. Discharge, etc., of order

Fees, etc.,
of trustee

(4) The judge may in any order under this section make provision for the remuneration, disbursements and indemnification of the trustee out of such moneys or otherwise as the judge may specify. *New.*

Appeal to
Court of
Appeal

45.—(1) Any person dissatisfied with a decision of Convocation made under section 31, 33 or 47, or any person against whom an order has been made under section 35, 36 or 37, or any person against whom an order, other than an order of reprimand in committee, has been made under section 39, or any person whose punishment has been ordered to be increased under subsection 3 of section 40 may appeal from the decision or order to the Court of Appeal within fifteen days from the day upon which he is served with the decision or order.

Certified
copies of
papers

(2) Upon the request of any person desiring to appeal and upon payment of the cost thereof, the Secretary shall furnish such person with a certified copy of all proceedings, evidence, reports, orders and papers received as evidence in Convocation and any committee of benchers in dealing with and disposing of the matter complained of.

Failure to
pay costs

(3) If the appellant fails to pay the cost of the certified copy and the cost of such additional copies of the evidence as may be reasonably required for the purposes of the appeal within fifteen days after written demand from the Secretary, the appeal shall be deemed to be abandoned.

Procedure
and record

(4) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy, certified by the Secretary, of the proceedings before Convocation or any committee of benchers, the evidence taken, the report of Convocation or any committee of benchers and all decisions, findings and orders of Convocation or any committee of benchers in the matter.

Practice

(5) Except as otherwise provided, appeals under this section shall be in accordance with the practice in appeals from the decision or order of a judge of the Supreme Court.

Orders

(6) Upon the hearing of an appeal under this section the Court of Appeal may make such order as the court considers proper or may refer the matter or any part thereof back to Convocation with such directions as the court considers proper.

Costs

(7) The Court of Appeal may make such order as to the costs of the appeal as the court considers proper. *New.*

Effect of
cancellation
and
suspension

46.—(1) When a person's membership or student membership is cancelled, all his rights and privileges as a member or

student member, as the case may be, cease, or, when a person's membership or student membership is suspended, the member or student member shall, during the period of suspension, possess no rights or privileges as a member or student member. R.S.O. 1960, c. 207, s. 46, *amended*.

(2) Where an appeal under section 45 is pending, the decision or order appealed against shall not thereby be stayed, but an application may be made to a judge of the Court of Appeal for a stay of the decision or order pending the disposition of the appeal, and the judge may dispose of the application as he considers proper and in so doing he may impose such terms and conditions as he considers appropriate. *New*. Where
appeal
pending

47. Where a person's membership or student membership is cancelled, he may apply to be readmitted, and Convocation, after due inquiry by a committee of benchers, may readmit him as a member or student member, as the case may be. *New*. Re-
admission

48. Where the rights and privileges of a member or student member are suspended for a definite or indefinite period, he may apply at any time to have his rights and privileges restored, and Convocation, after due inquiry by a committee of benchers, may restore his rights and privileges as a member or student member, as the case may be. R.S.O. 1960, c. 207, s. 45 (2, 3), *amended*. Termination
of suspension

49. Upon the readmission of a person as a member or student member or upon the termination of the suspension of the rights and privileges of a member or student member or upon the reprimand of a member or student member, Convocation or a committee of benchers may impose upon him such terms and conditions as it considers proper. *New*. Terms and
conditions

50. Notice of admission to membership and of any cancellation, suspension, resignation, readmission or other change in a member's status in the Society shall be given forthwith by the Secretary to the Registrar of the Supreme Court who shall keep a record thereof. R.S.O. 1960, c. 207, s. 45, *amended*. Notice to
Registrar
of S.C.O.

PROHIBITIONS AND OFFENCES

51.—(1) Except where otherwise provided by law, no person, other than a member whose rights and privileges are not suspended, shall act as a barrister or solicitor or hold himself out as or represent himself to be a barrister or solicitor or practise as a barrister or solicitor. R.S.O. 1960, c. 30, s. 5 (1); R.S.O. 1960, c. 378, s. 6 (1), *amended*. Prohibition
as to
practice, etc.

Offence

(2) Every person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than \$1,000. R.S.O. 1960, c. 30, s. 5 (2); R.S.O. 1960, c. 378, s. 6 (2), *amended*.

Proceedings to enjoin person convicted from practising law

(3) Where a conviction has been made under subsection 2, the Society may apply to a judge of the Supreme Court by originating motion for an order enjoining the person convicted from practising as a barrister or solicitor, and the judge may make the order and it may be enforced in the same manner as any other order or judgment of the Supreme Court. R.S.O. 1960, c. 30, s. 5 (5); R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

Discharge, etc., of order

(4) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 3. R.S.O. 1960, c. 30, s. 5 (6), *part*; R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

COMPENSATION FUND

Compensation Fund

52.—(1) The Society shall continue to maintain the fund known as “the Compensation Fund” and shall continue to hold it in trust for the purposes of this section. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.

Composition of Fund

(2) The Compensation Fund shall be made up of,

- (a) all moneys paid by members of the Society under subsection 3;
- (b) all moneys earned from the investment of moneys in the Fund;
- (c) all moneys recovered under subsection 7; and
- (d) any moneys contributed by any person. R.S.O. 1960, c. 207, s. 53 (2), *amended*.

Compensation Fund levy

(3) Every member, other than those of a class exempted by the rules, shall pay to the Society for the Compensation Fund such sum as is prescribed from time to time by the rules.

Insurance

(4) The Society may insure with any insurer licensed to carry on business in Ontario for such purposes and on such terms as Convocation considers expedient in relation to the Compensation Fund, and, in such event, the moneys in the Fund may be used for the payment of premiums. R.S.O. 1960, c. 207, s. 53 (3, 4), *amended*.

Grants

(5) Convocation in its absolute discretion may make grants from the Compensation Fund in order to relieve or mitigate loss sustained by any person in consequence of dishonesty on the part of any member in connection with such member's

law practice or in connection with any trust of which he was or is a trustee, notwithstanding that after the commission of the act of dishonesty he may have died or ceased to administer his affairs or to be a member. R.S.O. 1960, c. 207, s. 53 (1), *part, amended.*

(6) No grant shall be made out of the Compensation Fund unless notice in writing of the loss is received by the Secretary within six months after the loss came to the knowledge of the person suffering the loss or within such further time, not exceeding eighteen months, as in any case may be allowed by Convocation. R.S.O. 1960, c. 207, s. 53 (5), *amended.* Conditions of grants

(7) If a grant is made under this section, the Society is subrogated to the amount of the grant to any rights or remedies to which the person receiving the grant was entitled on account of the loss in respect of which the grant was made against the dishonest member or any other person, or, in the event of the death or insolvency or other disability of such member or other person, against his personal representative or other person administering his estate. R.S.O. 1960, c. 207, s. 53 (6), *amended.* Subrogation

(8) A person to whom a grant is made under this section, or, in the event of his death or insolvency or other disability, his personal representative or other person administering his estate, has no right to receive anything from the dishonest member or his estate in respect of the loss in respect of which the grant was made until the Society has been reimbursed the full amount of the grant. R.S.O. 1960, c. 207, s. 53 (7). Grantees' rights conditionally limited

(9) Where a grant has been made under this section and the dishonest member has been declared a bankrupt, the Society is entitled to prove against the bankrupt's estate for the full amount of the claim of the person to whom the grant was made and to receive all dividends on such amount until the Society has been reimbursed the full amount of the grant. *New.* Reimbursement from bankrupt's estate

(10) Convocation may delegate any of the powers conferred upon it by this section to a committee of benchers and, whether or not Convocation has made any such delegation, it may appoint any member as a referee and delegate to him any of the powers conferred upon it by this section that are not delegated to a committee. 1966, c. 79, s. 1, *part, amended.* Delegation of powers to committee or referee or both

(11) Where Convocation has delegated any of its powers under this section to a committee or to a referee, the committee or referee, as the case may be, shall report as required to Convocation, but where there is a delegation to both a committee and a referee, the referee shall report as required to the committee. 1966, c. 79, s. 1, *part, amended.* Reports

Costs of
administra-
tion

(12) There may be paid out of the Compensation Fund the costs of its administration, including the costs of investigations and hearings and all other costs, salaries and expenses necessarily incidental to the administration of the Fund. 1964, c. 54, s. 3, *amended*.

LEGAL EDUCATION; DEGREES

Bar Admis-
sion Course

53.—(1) The Society may maintain the Bar Admission Course and programs of continuing legal education.

Law
degrees

(2) The Society may grant degrees in law. *New*.

INDEMNITY FOR PROFESSIONAL LIABILITY

Indemnity
for
professional
liability

54. The Society may make arrangements for its members respecting indemnity for professional liability and respecting the payment and remission of premiums in connection therewith and prescribing levies to be paid by members or any class thereof and exempting members or any class thereof from all or any part of any such levy. *New*.

RULES

Rules

55.—(1) Subject to section 56, Convocation may make rules relating to the affairs of the Society and, without limiting the generality of the foregoing,

1. providing procedures for the making, amendment and revocation of the rules;
2. prescribing the seal and the coat of arms of the Society;
3. providing for the execution of documents by the Society;
4. respecting the borrowing of money and the giving of security therefor;
5. fixing the financial year of the Society and providing for the audit of the accounts and transactions of the Society;
6. providing for the time and manner of and the methods and procedures for the election of benchers;
7. providing procedures for the election of the Treasurer, the filling of a vacancy in the office of Treasurer, the appointment of an acting Treasurer to act in the

Treasurer's absence or inability to act, and prescribing the Treasurer's duties;

8. providing for the appointment of and prescribing the duties of the Secretary, one or more deputy secretaries and assistant secretaries and such other officers as are considered appropriate;
9. respecting Convocation;
10. providing for the establishment, composition, jurisdiction and operation of standing and other committees of the benchers and delegating to any committee such of the powers and duties of the benchers as may be considered expedient;
11. governing honorary benchers, *ex officio* benchers and honorary members and prescribing their rights and privileges;
12. governing members, life members and student members, and prescribing their rights and privileges;
13. prescribing fees and levies for members and student members or any class of either of them, and providing for the payment and remission thereof and exempting any class of either of them from all or any part of such fees or levies;
14. respecting the Compensation Fund and prescribing the amount of the levy to be paid to the Society for the Fund and exempting any class of members from all or any part of such levy;
15. prescribing oaths for members and student members;
16. providing for the payment to the Society by any member of the cost of any investigation or audit of his books, records, accounts and transactions;
17. providing for and governing meetings of members or representatives of members;
18. prescribing procedures for the call to the bar of barristers and the admission and enrolment of solicitors;
19. respecting legal education, including the Bar Admission Course;

20. defining and governing the employment of student members while under articles;
21. providing and governing bursaries, scholarships, medals and prizes;
22. providing for and governing extension courses, continuing legal education, and legal research;
23. governing degrees in law;
24. providing for the establishment, operation and dissolution of county and district law associations and respecting grants to such associations;
25. providing for and governing libraries;
26. providing for the occasional appearance as counsel in the courts of Ontario and before provincial judges, with the consent of the Treasurer and of the court or judge, of members of the legal profession from outside Ontario;
27. providing for the establishment, maintenance and administration of a benevolent fund for members and the dependants of deceased members;
28. prescribing forms and providing for their use, except the form of summons referred to in subsection 10 of section 34. R.S.O. 1960, c. 207, ss. 24, 35, 40, 41, 42 (1), 43 (*part*), 50, 51, 53 (9), 54 (2, 3), 55, 56 (1), *amended*.

Interpreta-
tion of rules

(2) The rules made under subsection 1 shall be interpreted as if they formed part of this Act. *New*.

REGULATIONS

Regulations

56. Subject to the approval of the Lieutenant Governor in Council, Convocation may make regulations respecting any matter that is outside the scope of the rule-making powers specified in section 55 and, without limiting the generality of the foregoing,

1. respecting any matter ancillary to the provisions of this Act with regard to the admission, conduct and discipline of members and student members and the suspension and restoration of their rights and privi-

leges, the cancellation of memberships and student memberships, the resignation of members, and the readmission of former members and student members;

2. requiring and prescribing the books, records and accounts to be kept by members and providing for the exemption from such requirements of any class of members;
3. requiring and providing for the examination or audit of members' books, records, accounts and transactions and the filing with the Society of reports with respect thereto;
4. authorizing and providing for the preparation, publication and distribution of a code of professional conduct and ethics.
5. respecting the reporting and publication of the decisions of the courts;
6. defining and governing the employment of barristers and solicitors clerks;
7. prescribing the form of the summons referred to in subsection 10 of section 34. R.S.O. 1960, c. 30, s. 2; R.S.O. 1960, c. 207, s. 43, *part*; R.S.O. 1960, c. 378, s. 3, *amended*.

MISCELLANEOUS

57. *The Law Society Act, The Law Society Amendment Act, 1960-61, The Law Society Amendment Act, 1964 and The Law Society Amendment Act, 1966* are repealed.

R.S.O. 1960,
c. 207;
1960-61,
c. 44;
1964, c. 54;
1966, c. 79,
repealed

58. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Commence-
ment

59. This Act may be cited as *The Law Society Act, 1970*.

Short title

An Act to consolidate and revise The
Law Society Act

1st Reading

February 27th, 1970

2nd Reading

3rd Reading

MR. WISHART

BILL 7

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to consolidate and revise The Law Society Act

MR. WISHART

(Reprinted as amended by the Legal and Municipal Committee)



EXPLANATORY NOTES

The purpose of this Bill is to consolidate and revise *The Law Society Act*, the parts of *The Barristers Act* and the parts of *The Solicitors Act* that deal with barristers and solicitors respectively as members of the Law Society, thus bringing into one Act in up-to-date form all the statutory provisions that govern the Law Society and its members.

These Acts have not been revised since 1912 and are now in many respects out of date.

There are three complementary Bills:

1. Bill 8, *An Act to amend The Solicitors Act*.
2. Bill 9, *An Act to amend The Barristers Act*.
3. Bill 10, *An Act to amend The Notaries Act, 1962-63*.

Attention is drawn to the following highlights in this Bill:

1. The Law Society of Upper Canada is continued as a corporation with that name but, instead of the corporation having only the Treasurer and the other benchers as members, all members of the Society (i.e. all lawyers) will be members of the corporation. See section 2.
2. A new provision will require annual meetings of the members to be held. See section 3.
3. The Law Society is subject to *The Corporations Act* by reason of the provisions of the latter. There are two exceptions to this general rule expressly made in section 6 of this Bill. Section 75a of *The Corporations Act* deals with proxies and section 326 authorizes the Lieutenant Governor to terminate for cause the existence of a corporation.
4. Section 9 is new. It is exactly the same in principle as section 6 of *The Professional Engineers Act, 1968-69* and section 30 of *The Surveyors Act, 1968-69*.
5. The provisions with respect to honorary benchers are unchanged in principle. See section 11.
6. The provisions respecting *ex officio* benchers are changed in principle as follows:
 - (1) All present *ex officio* benchers are continued. See section 16.
 - (2) In 1971 all *ex officio* benchers lose their right to vote in Convocation and in committee except former Treasurers who retain these rights until they reach the age of seventy-five. See sections 12 (2) and 13.
 - (3) Those who are elected as benchers at four elections and who serve for sixteen years become *ex officio* benchers, or, if they so choose, they may stand for re-election. See section 12 (1) and section 12 (3).
7. The responsibilities and powers of the Minister of Justice and Attorney General in his capacity as an *ex officio* bencher are spelled out. See section 13.

8. Starting in 1971, a general election of benchers will be held every four years instead of every five years. See section 15 (1).
9. Starting in 1971, forty benchers will be elected instead of thirty. See section 15 (1).
10. With reference to the election of benchers, twenty are to be elected from within Metropolitan Toronto and twenty from outside. Almost exactly one-half of the profession have their addresses on the Law Society's records in Metropolitan Toronto and in order to carry on the work of the Law Society, particularly the work of the Discipline Committee, it is necessary that approximately one-half of the benchers be readily available for meetings. It is considered to be equally important that at least one-half of the elected benchers should be from outside Metropolitan Toronto. The rules will provide for two separate ballots, one for the twenty benchers to be elected from within Metropolitan Toronto and one for the twenty benchers to be elected from outside Metropolitan Toronto. All members of the profession will be at liberty to vote on each ballot as it is felt that the benchers should be elected by the profession as a whole. See section 15 (2, 3).
11. The composition of a quorum is restricted to benchers who are present and entitled to vote. See section 24.
12. A Law Society Council is created, comprising representatives of the Law Society, of the county and district law associations, of the Canadian Bar Association, of the faculties of the law schools in Ontario, of the junior bar, and of the student members, together with three persons who are not members of the Law Society to be appointed by the Lieutenant Governor in Council. This Council will consider policy matters affecting the legal profession as a whole and the manner in which the members generally are discharging their obligations to the public. See section 26.
13. A number of basic provisions respecting admission to the Society, heretofore in the rules, are transferred to the Act. See section 27.
14. The status of the members of the Society as such is clarified and up-dated. See section 28.
15. The status of lawyers as officers of the courts is extended and clarified. See section 29.
16. The position of members of the Society who are appointed to judicial office is clarified. See section 31.
17. A number of basic provisions respecting discipline, heretofore in the rules, are transferred to and extended in the Act. See sections 33, 34.
18. The governing body is authorized to suspend the membership of any lawyer who is found after due inquiry to be incapable of practising law by reason of age, physical or mental illness, including addiction to alcohol or drugs, or other cause. See section 35.
19. An appeal from the discipline committee to Convocation is provided in minor disciplinary matters. See section 39. Sub-section 4 disqualifies committee members who took part in the original proceedings from taking part in the appeal.
20. A new provision authorizes the Society to reimburse a member who has been subjected to unwarranted disciplinary proceedings for his costs. See section 41.
21. Provision is made for the appointment of a trustee in proper cases temporarily to carry on and wind up the practice of a member of the Society who is disbarred, dies, has absconded, or is incapacitated as a consequence of which he is unable to practise, or where his practice is neglected. See section 43.

22. A general right of appeal to the Court of Appeal is provided from all disciplinary decisions of Convocation and decisions refusing admission, etc. See section 44.
23. A new subsection provides for a stay of a decision or order appealed against pending the disposition of the appeal. See section 45 (2).
24. A new subsection is designed to clarify the Society's right to reimbursement from a bankrupt's estate in compensation cases. See section 51 (9).
25. A new section provides for indemnity for professional liability. See section 53.
26. The rule-making powers of the governing body are clarified and up-dated. See section 54.
27. A rule is authorized under which out-of-Ontario lawyers may be allowed to appear occasionally in the courts of Ontario. See section 54 (1), par. 24.
28. Matters of concern to the public are taken out of the rules and made matters for regulations, which are not effective unless approved by the Lieutenant Governor in Council. These regulations will come under *The Regulations Act* and therefore must be filed with the Registrar of Regulations and published in *The Ontario Gazette*. See section 55.

In preparing this revision most of the applicable recommendations of the Royal Commission Inquiry into Civil Rights with respect to self-governing bodies have been adopted.

Although the likelihood of inaccuracies occurring in a tabular summary such as follows is obvious because of over-simplification, it may perhaps be said that four of the thirty-one recommendations of the McRuer Report are not in any way applicable to the subject-matter of this Bill. Of the remaining twenty-seven recommendations, twenty-three are adopted (five with additions, variations, in part, etc.) and four are not adopted.

<u>McRuer Recommendation</u>	<u>Section of Bill</u>
(Vol. 3, pp. 1209-1211)	
1. Not applicable.	
2. Not adopted, but see ss. 14 and 27.	
3. Not applicable.	
4. Not adopted.	ss. 28 (b) (c), 32
5. Not adopted.	
6. Adopted.	s. 39 (4)
7. Not applicable.	
8. Adopted with variation.	ss. 34, 37, 38.
9. Adopted.	s. 55 par. 4
10. Adopted.	s. 33 (13)
11. Adopted.	s. 33 (3)
12. Adopted.	s. 33 (4)

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|---|--------------|
| 13. Adopted. | s. 33 (8) |
| 14. This principle now followed;
will be continued. | |
| 15. Adopted as to counsel; not
adopted as to agent. | s. 33 (6) |
| 16. Adopted. | ss. 34–38 |
| 17. This principle now followed;
no change contemplated. | |
| 18. Adopted. | s. 50 (2) |
| 19. First part, not adopted;
second part, adopted. | s. 40 |
| 20. Adopted. | s. 41 |
| 21. Adopted with variation. | s. 45 (2) |
| 22. Adopted. | s. 27 (3) |
| 23. Adopted. | ss. 39, 44. |
| 24. Will be adopted. | |
| 25. Adopted. | s. 55 par. 1 |
| 26. Adopted. | s. 54 |
| 27. Adopted, but see s. 56 par. 6. | |
| 28. Adopted so far as practicable. | |
| 29. Not adopted. | |
| 30. Not adopted. | |
| 31. Not applicable. | |

BILL 7

1970

An Act to consolidate and revise The Law Society Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,

Interpre-
tation

- (a) "bencher" means a bencher of the Society;
- (b) "Convocation" means a general or special meeting of the benchers convened for the purpose of transacting business of the Society;
- (c) "member" means a member of the Society and includes a life member but does not include an honorary member or a student member;
- (d) "regulations" means the regulations made under this Act;
- (e) "rules" means the rules made under this Act;
- (f) "Secretary" means the Secretary of the Society;
- (g) "Society" means The Law Society of Upper Canada;
- (h) "Treasurer" means the Treasurer of the Society.
R.S.O. 1960, c. 207, s. 1 *amended*.

THE SOCIETY

2. The Law Society of Upper Canada authorized to be established by an Act of the Parliament of Upper Canada passed in the thirty-seventh year of the reign of his late Majesty George III and incorporated by an Act of the Parliament of Upper Canada passed in the second year of the reign of his late Majesty George IV is hereby continued as a corporation without share capital composed of the Treasurer, the benchers and the other members from time to time.
R.S.O. 1960, c. 207, s. 2, *part, amended*.

Society
continued
1797, c. 13
1822, c. 5

Annual
meeting

3. A meeting of the members shall be held annually at such place and at such time as is determined from time to time in Convocation, notice of which shall be given by publication as provided by the rules. *New.*

Seat

4. The permanent seat of the Society shall continue to be at Osgoode Hall in the City of Toronto. *New.*

Acquisition
and
disposition
of property

5.—(1) The Society may purchase, acquire, take by gift, bequest, devise, donation, or otherwise any real or personal property for its purposes, and it may hold, sell, mortgage, lease, or dispose of any of its real or personal property. R.S.O. 1960, c. 207, s. 2, *amended.*

Trustee
powers

(2) The Society has and may exercise all powers of trustees under the laws of Ontario.

Borrowing
power

(3) The Society may borrow money for its purposes. *New.*

R.S.O. 1960,
c. 71,
ss. 75a, 326
not to apply

6.—(1) Sections 75a and 326 of *The Corporations Act* do not apply to the Society.

Conflict

(2) In the event of conflict between any provision of this Act and any provision of *The Corporations Act*, the provision of this Act prevails. *New.*

Treasurer

7. The Treasurer is the president and head of the Society. *New.*

Secretary

8. The Secretary is the chief administrative officer of the Society. *New.*

Liability
of benchers,
officers and
employees

9. No action or other proceedings for damages shall be instituted against the Treasurer or any bencher, official of the Society, or person appointed in Convocation for any act done in good faith in the performance or intended performance of any duty or in the exercise or in the intended exercise of any power under this Act, a regulation or a rule, or for any neglect or default in the performance or exercise in good faith of any such duty or power. *New.*

BENCHERS

Government
of the
Society

10. The benchers shall govern the affairs of the Society, including the call of persons to practise at the bar of the courts of Ontario and their admission and enrolment to practise as solicitors in Ontario. *New.*

Honorary
benchers

11. Every person,

(a) who is an honorary bencher on the day this Act comes into force; or

(b) who after that day is made an honorary bencher,

is an honorary bencher but as such has only the rights and privileges prescribed by the rules. *New.*

12.—(1) The following, if and while they are members, are *Ex officio* benchers:
ex officio benchers

1. The Minister of Justice and Attorney General for Canada.
2. The Solicitor General for Canada.
3. The Minister of Justice and Attorney General for Ontario and every person who has held that office or the office of Attorney General for Ontario.
4. Every retired judge of the Supreme Court of Canada or of the Exchequer Court of Canada who was at the time of his appointment a member of the bar of Ontario and who became an *ex officio* bencher under paragraph 5 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964. R.S.O. 1960, c. 207
5. Every retired judge of the Supreme Court of Ontario who became an *ex officio* bencher under paragraph 6 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964.
6. Every person who was elected a bencher at four quinquennial elections and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as that paragraph was before it was re-enacted in 1964.
7. Every person who was elected a bencher at three quinquennial elections and served as a bencher for fifteen years and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as re-enacted in 1964. 1964, c. 54, s. 1, *amended*.
8. Every person who is elected a bencher at three elections and serves as a bencher for fifteen years before the election in 1975. *New.*
9. Every person who is elected a bencher at four elections and who serves as a bencher for sixteen years. 1964, c. 54, s. 1 (2), *part, amended*.

(2) An *ex officio* bencher under subsection 1 has all the rights and privileges prescribed by the rules, except that after the election of benchers in 1971 he no longer shall have the right to vote in Convocation or in a committee. *New.* Rights and privileges

(3) An elected bencher who becomes qualified as an *ex officio* bencher under subsection 1 may, if he chooses, continue as an elected bencher and is eligible to be re-elected in any Option

subsequent election of benchers without prejudice to his right to become an *ex officio* bencher at any time so long as he is still an elected bencher. *New.*

Minister of Justice,
guardian of
the public
interest

13.—(1) The Minister of Justice and Attorney General for Ontario in his capacity as an *ex officio* bencher shall serve as the guardian of the public interest in all matters within the scope of this Act or having to do with the legal profession in any way, and for this purpose he may at any time require the production of any document, paper, record or thing pertaining to the affairs of the Society.

Admissions

(2) No admission of any person in any document, paper, record or thing produced under subsection 1 is admissible in evidence against that person in any proceedings other than disciplinary proceedings under this Act.

Protection
of Minister

(3) No person who is or has been the Minister of Justice and Attorney General for Ontario is subject to any disciplinary proceedings of the Society or to any penalty imposed in Convocation or in a committee of benchers for anything done by him while exercising the functions of such office. *New.*

Treasurers
and former
Treasurers
are *ex officio*
benchers

14.—(1) Every member who has been or is elected to the office of Treasurer is an *ex officio* bencher with all the rights and privileges of an elected bencher. 1964, c. 54, s. 1 (2), *part, amended.*

Rights and
privileges

(2) Every *ex officio* bencher under subsection 1 shall, upon attaining the age of seventy-five years, continue to be an *ex officio* bencher with all the rights and privileges prescribed by the rules, except that he no longer shall have the right to vote in Convocation or in a committee. *New.*

Election of
benchers

15.—(1) An election of benchers shall be held in 1971 and in every fourth year thereafter at each of which forty benchers shall be elected by secret ballot from and by the members in accordance with this Act and the rules. R.S.O. 1960, c. 207, s. 8 (1), *part, amended.*

Area repre-
sentation

(2) Twenty of the forty benchers mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are within The Municipality of Metropolitan Toronto as it is constituted on that day.

Idem

(3) Twenty of the forty benchers mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are outside The Municipality of Metropolitan Toronto as it is constituted on that day. *New.*

16. The benchers elected at the election of benchers in 1966 or thereafter shall continue in office until those elected at the election of benchers in 1971 take office. *New.* Present benchers continue

17. Every member in good standing and not in arrear to the Society for any fee or levy is an elector qualified to vote at an election of benchers. R.S.O. 1960, c. 207, s. 9, *amended.* Who may vote

18. No member is eligible to be a candidate for bencher at any election who is not qualified to vote at the election. R.S.O. 1960, c. 207, s. 11, *amended.* Qualification of candidates

19. Any bencher is eligible for re-election. R.S.O. 1960, c. 207, s. 12, *amended.* Benchers may be re-elected

20. Any member who was qualified to vote at an election of benchers may, in accordance with the rules, petition Convocation against the election of any bencher. R.S.O. 1960, c. 207, s. 30, *part, amended.* Election petitions

21. The elected benchers shall take office at the first general Convocation following their election and, subject to this Act, shall hold office until their successors take office. R.S.O. 1960, c. 207, s. 28, *amended.* Taking office

22. In case of failure to elect the requisite number of qualified benchers or in case of a vacancy, the remaining benchers shall as soon as convenient supply the deficiency in the number of benchers or fill the vacancy by electing in Convocation the requisite number of qualified members as benchers, and the benchers so elected shall, subject to this Act, hold office until their successors take office. R.S.O. 1960, c. 207, s. 34, *amended.* Vacancies

23. The benchers may remove from office any elected bencher who fails to attend six consecutive general Convocations. R.S.O. 1960, c. 207, s. 29 (1), *amended.* Removal for non-attendance

24.—(1) Except as provided by subsection 2, ten benchers present and entitled to vote in Convocation constitute a quorum for the transaction of business. Quorum

(2) No disciplinary matter shall be dealt with in Convocation unless fifteen or more benchers are present and entitled to vote. *New.* Idem, disciplinary matters

25.—(1) The benchers shall annually at the general Convocation in the month of May, or at such other time as the benchers may fix, elect one of their number as Treasurer. Election of Treasurer

(2) The Treasurer is eligible for re-election. R.S.O. 1960, c. 207, s. 33, *amended.* Treasurer eligible for re-election

LAW SOCIETY COUNCIL

Law Society
Council,
duties

26.—(1) There shall be a body known as the “Law Society Council” to consider the manner in which the members of the Society are discharging their obligations to the public and generally matters affecting the legal profession as a whole.

Composition

(2) The Law Society Council shall be composed of,

(a) the Treasurer;

(b) the chairman and the vice-chairman of each standing committee;

(c) the vice-president for Ontario of the Canadian Bar Association;

(d) the president of each county or district law association or his nominee, being a member of his association;

(e) one member who is a full-time teacher at a law school in Ontario approved by the Society, to be appointed annually by the faculty of the law school;

(f) two student members elected annually by the student members attending the teaching period of the Bar Admission Course;

(g) three members who have been members of the Society for not more than ten years appointed by the annual meeting of the Ontario Section of the Canadian Bar Association; and

(h) nine persons, not being members of the Society, appointed by the Lieutenant Governor in Council for such terms as he sees fit.

Meetings
and report

(3) The Council shall meet at least twice a year and shall report after each meeting to the Lieutenant Governor in Council and to Convocation.

Chairman

(4) The first order of business at the first meeting of the Council in any year is to elect a chairman.

Rules

(5) The Council may make such rules, procedural or otherwise, as it considers appropriate for the proper conduct of its affairs.

Cost

(6) The administrative cost and all expenses of the Council shall be borne and paid by the Society. *New.*

ADMISSION OF MEMBERS

27.—(1) Every application for admission to the Society shall be on the prescribed form and be accompanied by the prescribed fees. ^{Form of applications}

(2) An applicant for admission to the Society must be of good character. ^{Good character}

(3) No applicant for admission to the Society who has met all admission requirements shall be refused admission. ^{Where no refusal}

(4) No application for admission to the Society shall be refused until the applicant has been given an opportunity to appear in person before a committee of benchers. ^{Appearance before refusal}

(5) Where an applicant for admission to the Society is refused admission, he is entitled to a statement of the reasons for the refusal. ^{Statement of reasons}

(6) Where an application for admission to the Society has been refused, another application based on new evidence may be made at any time *New*. ^{Subsequent applications}

CLASSES OF MEMBERS

28. Subject to sections 30, 31, 32, 34, 35, 36 and 38, ^{Classes of members}

(a) the persons, ^{honorary members}

(i) who are honorary members of the Society on the day this Act comes into force, or

(ii) who after that day are made honorary members of the Society,

are honorary members with only the rights and privileges prescribed by the rules;

(b) the persons, being Canadian citizens or other British subjects, ^{life members}

(i) who are honorary life members on the day this Act comes into force, or

(ii) who after that day become life members,

are life members with the rights and privileges of members, and such additional rights and privileges as are prescribed by the rules;

(c) the persons, being Canadian citizens or other British subjects, ^{members}

- (i) who are members on the day this Act comes into force, or
- (ii) who after that day successfully complete the Bar Admission Course and are called to the bar and admitted and enrolled as solicitors, or
- (iii) who after that day transfer from a jurisdiction outside Ontario and are called to the bar and admitted and enrolled as solicitors,

are members and entitled to practise law in Ontario as barristers and solicitors;

student
members

(d) the persons,

- (i) who are students-at-law in the Bar Admission Course on the day this Act comes into force, or
- (ii) who after that day become students-at-law in the Bar Admission Course,

are student members with the rights and privileges prescribed by the rules. R.S.O. 1960, c. 207, s. 4, *amended*.

Members
are officers
of the
courts

29. Every member is an officer of every court of record in Ontario.

Resignation

30.—(1) A member or student member may make application to resign from the Society, and Convocation may accept the resignation of such member or student member whereupon all his rights and privileges as a member or student member, as the case may be, cease.

Re-
admission

(2) Any former member or student member may make application for readmission as a member or student member, as the case may be, and Convocation may readmit such former member or student member. *New.*

Effect of
appoint-
ment to
Bench

31. The membership of any member or former member who has assumed office or hereafter assumes office as,

(a) a full-time judge under any Act of the Parliament of Canada; or

1968, c. 103
R.S.O. 1960,
c. 110

(b) a full-time judge under *The Provincial Courts Act, 1968* or *The Division Courts Act*; or

- (c) the Senior Master or a full-time master or a full-time assistant master or a full-time local master of the Supreme Court or a full-time taxing officer,

is, while he continues in any such office, in abeyance, and, upon his ceasing to hold such office, shall be restored by his giving notice in writing to such effect to the Secretary. *New.*

32.—(1) When a member ceases to be a Canadian citizen or other British subject, he ceases to be a member. Effect of losing Canadian citizenship

(2) Any person whose membership terminated under subsection 1 may, upon again becoming a Canadian citizen or other British subject, make application for readmission as a member and Convocation may readmit him. *New.* Re-admission

DISCIPLINE

33.—(1) No disciplinary action under section 34, 35, 37 or 38 shall be taken unless, Complaint and hearing

- (a) a complaint under oath has been filed in the office of the Secretary and a copy thereof has been served on the person whose conduct is being investigated;
- (b) the person whose conduct is being investigated has been served with a notice of the time and place of the hearing; and
- (c) a committee of benchers has heard evidence of or on behalf of the complainant and, if the person whose conduct is being investigated appears at the hearing and so requests, has heard his evidence and any evidence on his behalf and has reached the decision that he is guilty.

(2) Any person presiding at a hearing may administer oaths to witnesses and require them to give evidence under oath. Power to take sworn evidence

(3) If the person whose conduct is being investigated fails to appear in answer to the notice at the time and place appointed, the hearing may be conducted in his absence. Failure to appear

(4) Hearings shall be held *in camera*, but if the person whose conduct is being investigated requests otherwise by a notice in writing delivered to the Secretary before the day fixed for the hearing, the committee may conduct the hearing in public or otherwise as it considers proper. Disciplinary hearings to be held in camera

- Adjourn-
ments (5) A hearing may be adjourned at any time and from time to time.
- Attendance
of person
being
investigated (6) A person whose conduct is being investigated, if present in person at the hearing, has the right to be represented by counsel, to adduce evidence and to make submissions, and any such person may be compelled to attend and give evidence in the manner provided in subsection 10, but such person shall be advised of his right to object to answer any question under section 9 of *The Evidence Act* and section 5 of the *Canada Evidence Act*.
- R.S.O. 1960,
c. 125
R.S.C. 1952,
c. 307
- Examina-
tion and
cross-
examination (7) At a hearing, the complainant and the person whose conduct is being investigated have the right to examine the witnesses called by them respectively, and to cross-examine the witnesses opposed in interest, including the deponent of an affidavit or a statutory declaration submitted in evidence.
- Hearing of
evidence
R.S.O. 1960,
c. 125 (8) The oral evidence submitted at a hearing shall be taken down in writing or by any other method authorized by *The Evidence Act*.
- Rules of
evidence (9) The rules of evidence applicable in civil proceedings are applicable at a hearing, except that an affidavit or statutory declaration of any person is admissible in evidence as *prima facie* proof of the statements made therein.
- Summons
to witness (10) The Treasurer, the chairman or a vice-chairman of a committee of benchers, or the Secretary may, and the Secretary upon application of a person whose conduct is being investigated shall, issue a summons in the prescribed form commanding the attendance and examination of any person as a witness, and the production of any document or thing, the production of which could be compelled at the trial of an action, before the committee of benchers at the time and place mentioned in the summons and stating that failure to obey the summons will render the person liable to imprisonment on an application to the Supreme Court, but the person whose attendance is required is entitled to the like conduct money and payment for expenses and loss of time as upon attendance as a witness at a trial in the Supreme Court.
- Failure of
witness to
appear, etc. (11) If any person,
- (a) on being duly summoned to appear as a witness makes default in attending; or
 - (b) being in attendance as a witness refuses to take an oath legally required to be taken, or to produce any document or thing in his power or control legally required to be produced by him, or to answer any question which he is legally required to answer; or

- (c) does any other thing which would, if the committee had been a court of law having power to commit for contempt, have been contempt of that court,

the person presiding at the hearing may certify the offence of that person under his hand to the Supreme Court and the court may thereupon inquire into the alleged offence and after hearing any witnesses who may be produced against or on behalf of the person charged with the offence, and after hearing any submissions that may be offered in defence, punish or take steps for the punishment of that person in the like manner as if he had been guilty of contempt of court.

(12) The decision taken after a hearing shall be in writing and shall contain or be accompanied by the reasons for the decision in which are set out the findings of fact and the conclusions of law, if any, based thereon, and a copy of the decision and the reasons therefor, together with a notice to the person whose conduct is being investigated of his right of appeal, shall be served upon him within thirty days after the date of the decision. Decision

(13) Any document required to be served under this Act upon a person whose conduct is being investigated shall be served personally upon him or by mailing a copy thereof in a registered letter addressed to him at his last known residence or office address as shown by the records of the Society, and service shall be effected not less than ten days before the date of the hearing or the event or thing required to be done, as the case may be, and proof by affidavit of the service is sufficient. *New.* Service of documents

34. If a member is found guilty of professional misconduct or of conduct unbecoming a barrister and solicitor after due investigation by a committee of benchers, Convocation may by order cancel his membership in the Society by disbarring him as a barrister and striking his name off the roll of solicitors or may by order suspend his rights and privileges as a member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (1), *amended.* Disbarment, etc., for misconduct

35. If a member has been found pursuant to any Act to be mentally incompetent or mentally ill, or has been found after due inquiry by a committee of benchers incapable of practising law as a barrister and solicitor by reason of age, physical or mental illness including addiction to alcohol or drugs, or any other cause, Convocation may by order limit or suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *amended.* Suspension for incapacity

Suspension
for failure
to pay
fees

36. If a member fails to pay any fee or levy payable by him to the Society within four months after the day on which payment was due, Convocation may by order suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *part, amended*.

Reprimand
in committee
for
misconduct

37. If a committee of benchers finds that a member has been guilty of professional misconduct or conduct unbecoming a barrister and solicitor which in its opinion does not warrant disbarment, suspension or reprimand in Convocation, the committee may by order reprimand him. *New*.

Student
members'
misconduct

38. If a student member is found after due inquiry by a committee of benchers guilty of conduct unbecoming a student member, the committee may by order reprimand him or Convocation may by order cancel his student membership or may by order suspend his rights and privileges as a student member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (2), *amended*.

Appeal to
Convocation

39.—(1) Any member who has been found guilty under section 37 or any student member who has been found guilty under section 38 and, in either case, has been ordered to be reprimanded in committee, may appeal from the order of reprimand to Convocation within fifteen days from the day upon which he is served with the order of the committee.

Procedure
and record

(2) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy of the proceedings before the committee, the evidence taken, the committee's report and all decisions, findings and orders of the committee in the matter.

Orders

(3) Upon the hearing of an appeal under this section, Convocation may vary the punishment imposed by the committee or may refer the matter or any part thereof back to a committee with such directions as it considers proper or may make such order as it considers proper in the circumstances.

Disqualifi-
cation

(4) No bencher who sat on the committee of benchers when the order appealed from was made shall take any part in the hearing of the appeal in Convocation.

Decision
final

(5) Subject to section 44, the decision of Convocation under this section is final and not subject to any further appeal. *New*.

40. A person whose membership or student membership has been cancelled or whose rights and privileges as a member or student member have been suspended or who has been reprimanded may be ordered to pay the expense, or part of the expense, incurred by the Society in the investigation or hearing of any complaint in respect of which he has been found guilty. R.S.O. 1960, c. 207, s. 44 (3), *amended*. ^{Expenses of investigations}

41. Where it appears that disciplinary proceedings against a member or student member were unwarranted, Convocation may order that such costs as it considers just be paid by the Society to the member or student member whose conduct was the subject of the proceedings. *New*. ^{Costs where disciplinary proceedings unwarranted}

42.—(1) If the Treasurer or the Secretary or the chairman or the vice-chairman of any committee of benchers dealing with disciplinary matters has reasonable cause to believe that a member has been or may be guilty of misconduct in connection with any property in his possession or under his control, a judge of the Supreme Court may, upon an *ex parte* application by the Society, order that the property described in the order shall not be paid out or dealt with by the person or persons named in the order without the leave of a judge of the Supreme Court. 1960-61, c. 44, s. 1, *amended*. ^{Stop-orders on members' bank accounts, etc.}

(2) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. *New*. ^{Discharge, etc., of stop-orders}

43.—(1) Where a member or former member dies, disappears or leaves Ontario or a person's membership in the Society is cancelled or his rights and privileges as a member are suspended and, in any such event, his practice is neglected to the prejudice of any person or no provision has been made for the protection of his clients' interests, a judge of the Supreme Court may, upon an *ex parte* application by the Society, by order appoint a person as trustee, with or without bond, to take possession of any property in the possession of or under the control of such member or former member for the purpose of preserving, carrying on or winding up the practice of such member or former member. ^{Appointment of trustees}

(2) A person appointed under subsection 1 shall, in respect of any trust property of such member or former member, be the trustee thereof, and he shall in respect thereof take the place of the personal representative, committee or other representative, if any, of such member or former member. ^{Idem}

(3) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. ^{Discharge, etc., of order}

Fees, etc.,
of trustee

(4) The judge may in any order under this section make provision for the remuneration, disbursements and indemnification of the trustee out of such moneys or otherwise as the judge may specify. *New.*

Appeal to
Court of
Appeal

44.—(1) Any person dissatisfied with a decision of Convocation made under section 30, 32 or 46, or any person against whom an order has been made under section 34, 35 or 36, or any person against whom an order, other than an order of reprimand in committee, has been made under section 38, or any person whose punishment has been ordered to be increased under subsection 3 of section 39 may appeal from the decision or order to the Court of Appeal within fifteen days from the day upon which he is served with the decision or order.

Certified
copies of
papers

(2) Upon the request of any person desiring to appeal and upon payment of the cost thereof, the Secretary shall furnish such person with a certified copy of all proceedings, evidence, reports, orders and papers received as evidence in Convocation and any committee of benchers in dealing with and disposing of the matter complained of.

Failure to
pay costs

(3) If the appellant fails to pay the cost of the certified copy and the cost of such additional copies of the evidence as may be reasonably required for the purposes of the appeal within fifteen days after written demand from the Secretary, the appeal shall be deemed to be abandoned.

Procedure
and record

(4) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy, certified by the Secretary, of the proceedings before Convocation or any committee of benchers, the evidence taken, the report of Convocation or any committee of benchers and all decisions, findings and orders of Convocation or any committee of benchers in the matter.

Practice

(5) Except as otherwise provided, appeals under this section shall be in accordance with the practice in appeals from the decision or order of a judge of the Supreme Court.

Orders

(6) Upon the hearing of an appeal under this section the Court of Appeal may make such order as the court considers proper or may refer the matter or any part thereof back to Convocation with such directions as the court considers proper.

Costs

(7) The Court of Appeal may make such order as to the costs of the appeal as the court considers proper. *New.*

Effect of
cancellation
and
suspension

45.—(1) When a person's membership or student membership is cancelled, all his rights and privileges as a member or

student member, as the case may be, cease, or, when a person's membership or student membership is suspended, the member or student member shall, during the period of suspension, possess no rights or privileges as a member or student member. R.S.O. 1960, c. 207, s. 46, *amended*.

(2) Where an appeal under section 44 is pending, the decision or order appealed against shall not thereby be stayed, but an application may be made to a judge of the Court of Appeal for a stay of the decision or order pending the disposition of the appeal, and the judge may dispose of the application as he considers proper and in so doing he may impose such terms and conditions as he considers appropriate. *New*.

46. Where a person's membership or student membership is cancelled, he may apply to be readmitted, and Convocation, after due inquiry by a committee of benchers, may readmit him as a member or student member, as the case may be. *New*.

47. Where the rights and privileges of a member or student member are suspended for a definite or indefinite period, he may apply at any time to have his rights and privileges restored, and Convocation, after due inquiry by a committee of benchers, may restore his rights and privileges as a member or student member, as the case may be. R.S.O. 1960, c. 207, s. 45 (2, 3), *amended*.

48. Upon the readmission of a person as a member or student member or upon the termination of the suspension of the rights and privileges of a member or student member or upon the reprimand of a member or student member, Convocation or a committee of benchers may impose upon him such terms and conditions as it considers proper. *New*.

49. Notice of admission to membership and of any cancellation, suspension, resignation, readmission or other change in a member's status in the Society shall be given forthwith by the Secretary to the Registrar of the Supreme Court who shall keep a record thereof. R.S.O. 1960, c. 207, s. 45, *amended*.

PROHIBITIONS AND OFFENCES

50.—(1) Except where otherwise provided by law, no person, other than a member whose rights and privileges are not suspended, shall act as a barrister or solicitor or hold himself out as or represent himself to be a barrister or solicitor or practise as a barrister or solicitor. R.S.O. 1960, c. 30, s. 5 (1); R.S.O. 1960, c. 378, s. 6 (1), *amended*.

- Offence (2) Every person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than \$1,000. R.S.O. 1960, c. 30, s. 5 (2); R.S.O. 1960, c. 378, s. 6 (2), *amended*.
- Proceedings to enjoin person convicted from practising law (3) Where a conviction has been made under subsection 2, the Society may apply to a judge of the Supreme Court by originating motion for an order enjoining the person convicted from practising as a barrister or solicitor, and the judge may make the order and it may be enforced in the same manner as any other order or judgment of the Supreme Court. R.S.O. 1960, c. 30, s. 5 (5); R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.
- Discharge, etc., of order (4) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 3. R.S.O. 1960, c. 30, s. 5 (6), *part*; R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

COMPENSATION FUND

- Compensation Fund **51.**—(1) The Society shall continue to maintain the fund known as “the Compensation Fund” and shall continue to hold it in trust for the purposes of this section. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.
- Composition of Fund (2) The Compensation Fund shall be made up of,
- (a) all moneys paid by members of the Society under subsection 3;
 - (b) all moneys earned from the investment of moneys in the Fund;
 - (c) all moneys recovered under subsection 7; and
 - (d) any moneys contributed by any person. R.S.O. 1960, c. 207, s. 53 (2), *amended*.
- Compensation Fund levy (3) Every member, other than those of a class exempted by the rules, shall pay to the Society for the Compensation Fund such sum as is prescribed from time to time by the rules.
- Insurance (4) The Society may insure with any insurer licensed to carry on business in Ontario for such purposes and on such terms as Convocation considers expedient in relation to the Compensation Fund, and, in such event, the moneys in the Fund may be used for the payment of premiums. R.S.O. 1960, c. 207, s. 53 (3, 4), *amended*.
- Grants (5) Convocation in its absolute discretion may make grants from the Compensation Fund in order to relieve or mitigate loss sustained by any person in consequence of dishonesty on the part of any member in connection with such member’s

law practice or in connection with any trust of which he was or is a trustee, notwithstanding that after the commission of the act of dishonesty he may have died or ceased to administer his affairs or to be a member. R.S.O. 1960, c. 207, s. 53 (1), *part, amended.*

(6) No grant shall be made out of the Compensation Fund unless notice in writing of the loss is received by the Secretary within six months after the loss came to the knowledge of the person suffering the loss or within such further time, not exceeding eighteen months, as in any case may be allowed by Convocation. R.S.O. 1960, c. 207, s. 53 (5), *amended.* Conditions of grants

(7) If a grant is made under this section, the Society is subrogated to the amount of the grant to any rights or remedies to which the person receiving the grant was entitled on account of the loss in respect of which the grant was made against the dishonest member or any other person, or, in the event of the death or insolvency or other disability of such member or other person, against his personal representative or other person administering his estate. R.S.O. 1960, c. 207, s. 53 (6), *amended.* Subrogation

(8) A person to whom a grant is made under this section, or, in the event of his death or insolvency or other disability, his personal representative or other person administering his estate, has no right to receive anything from the dishonest member or his estate in respect of the loss in respect of which the grant was made until the Society has been reimbursed the full amount of the grant. R.S.O. 1960, c. 207, s. 53 (7). Grantees' rights conditionally limited

(9) Where a grant has been made under this section and the dishonest member has been declared a bankrupt, the Society is entitled to prove against the bankrupt's estate for the full amount of the claim of the person to whom the grant was made and to receive all dividends on such amount until the Society has been reimbursed the full amount of the grant. *New.* Reimbursement from bankrupt's estate

(10) Convocation may delegate any of the powers conferred upon it by this section to a committee of benchers and, whether or not Convocation has made any such delegation, it may appoint any member as a referee and delegate to him any of the powers conferred upon it by this section that are not delegated to a committee. 1966, c. 79, s. 1, *part, amended.* Delegation of powers to committee or referee or both

(11) Where Convocation has delegated any of its powers under this section to a committee or to a referee, the committee or referee, as the case may be, shall report as required to Convocation, but where there is a delegation to both a committee and a referee, the referee shall report as required to the committee. 1966, c. 79, s. 1, *part, amended.* Reports

Costs of
administra-
tion

(12) There may be paid out of the Compensation Fund the costs of its administration, including the costs of investigations and hearings and all other costs, salaries and expenses necessarily incidental to the administration of the Fund. 1964, c. 54, s. 3, *amended*.

LEGAL EDUCATION; DEGREES

Bar Admis-
sion Course

52.—(1) The Society may maintain the Bar Admission Course and programs of continuing legal education.

Law
degrees

(2) The Society may grant degrees in law. *New*.

INDEMNITY FOR PROFESSIONAL LIABILITY

Indemnity
for
professional
liability

53. The Society may make arrangements for its members respecting indemnity for professional liability and respecting the payment and remission of premiums in connection therewith and prescribing levies to be paid by members or any class thereof and exempting members or any class thereof from all or any part of any such levy. *New*.

RULES

Rules

54.—(1) Subject to section 55, Convocation may make rules relating to the affairs of the Society and, without limiting the generality of the foregoing,

1. providing procedures for the making, amendment and revocation of the rules;
2. prescribing the seal and the coat of arms of the Society;
3. providing for the execution of documents by the Society;
4. respecting the borrowing of money and the giving of security therefor;
5. fixing the financial year of the Society and providing for the audit of the accounts and transactions of the Society;
6. providing for the time and manner of and the methods and procedures for the election of benchers;
7. providing procedures for the election of the Treasurer, the filling of a vacancy in the office of Treasurer, the appointment of an acting Treasurer to act in the

Treasurer's absence or inability to act, and prescribing the Treasurer's duties;

8. providing for the appointment of and prescribing the duties of the Secretary, one or more deputy secretaries and assistant secretaries and such other officers as are considered appropriate;
9. respecting Convocation;
10. providing for the establishment, composition, jurisdiction and operation of standing and other committees and delegating to any committee such of the powers and duties of the benchers as may be considered expedient;
11. governing honorary benchers, *ex officio* benchers and honorary members and prescribing their rights and privileges;
12. governing members, life members and student members, and prescribing their rights and privileges;
13. prescribing fees and levies for members and student members or any class of either of them, and providing for the payment and remission thereof and exempting any class of either of them from all or any part of such fees or levies;
14. respecting the Compensation Fund and prescribing the amount of the levy to be paid to the Society for the Fund and exempting any class of members from all or any part of such levy;
15. prescribing oaths for members and student members;
16. providing for the payment to the Society by any member of the cost of any investigation or audit of his books, records, accounts and transactions;
17. providing for and governing meetings of members or representatives of members;
18. prescribing procedures for the call to the bar of barristers and the admission and enrolment of solicitors;
19. defining and governing the employment of student members while under articles;

20. providing and governing bursaries, scholarships, medals and prizes;
21. providing for and governing extension courses, continuing legal education, and legal research;
22. governing degrees in law;
23. providing for and governing libraries;
24. providing for the occasional appearance as counsel in the courts of Ontario and before provincial judges, with the consent of the Treasurer and of the court or judge, of members of the legal profession from outside Ontario;
25. providing for the establishment, maintenance and administration of a benevolent fund for members and the dependants of deceased members;
26. prescribing forms and providing for their use, except the form of summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 207, ss. 24, 35, 40, 41, 42 (1), 43 (*part*), 50, 51, 53 (9), 54 (2, 3), 55, 56 (1), *amended*.

Interpreta-
tion of rules

(2) The rules made under subsection 1 shall be interpreted as if they formed part of this Act.

Availability
of copies of
rules

(3) A copy of the rules made under subsection 1, as amended from time to time,

(a) shall be filed in the office of the Minister of Justice and Attorney General; and

(b) shall be available for public inspection in the office of the Secretary. *New.*

REGULATIONS

Regulations

55. Subject to the approval of the Lieutenant Governor in Council, Convocation may make regulations respecting any matter that is outside the scope of the rule-making powers specified in section 54 and, without limiting the generality of the foregoing,

1. respecting any matter ancillary to the provisions of this Act with regard to the admission, conduct and discipline of members and student members and the suspension and restoration of their rights and privi-

leges, the cancellation of memberships and student memberships, the resignation of members, and the readmission of former members and student members;

2. requiring and prescribing the books, records and accounts to be kept by members and providing for the exemption from such requirements of any class of members;
3. requiring and providing for the examination or audit of members' books, records, accounts and transactions and the filing with the Society of reports with respect thereto;
4. authorizing and providing for the preparation, publication and distribution of a code of professional conduct and ethics.
5. respecting the reporting and publication of the decisions of the courts;
6. defining and governing the employment of barristers and solicitors clerks;
7. respecting legal education, including the Bar Admission Course;
8. providing for the establishment, operation and dissolution of county and district law associations and respecting grants to such associations;
9. prescribing the form of the summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 30, s. 2; R.S.O. 1960, c. 207, s. 43, *part*; R.S.O. 1960, c. 378, s. 3, *amended*.

MISCELLANEOUS

56. *The Law Society Act, The Law Society Amendment Act, 1960-61, The Law Society Amendment Act, 1964 and The Law Society Amendment Act, 1966* are repealed.

R.S.O. 1960,
c. 207;
1960-61,
c. 44;
1964, c. 54;
1966, c. 79,
repealed

57. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Commence-
ment

58. This Act may be cited as *The Law Society Act, 1970*. Short title

An Act to consolidate and revise The
Law Society Act

1st Reading

February 27th, 1970

2nd Reading

April 14th, 1970

3rd Reading

MR. WISHART

(Reprinted as amended by the Legal and
Municipal Committee)

BILL 7

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to consolidate and revise The Law Society Act

MR. WISHART

(Reprinted as amended by the Committee of the Whole House)

TORONTO

PRINTED AND PUBLISHED BY WILLIAM KINMOND, QUEEN'S PRINTER AND PUBLISHER

EXPLANATORY NOTES

The purpose of this Bill is to consolidate and revise *The Law Society Act*, the parts of *The Barristers Act* and the parts of *The Solicitors Act* that deal with barristers and solicitors respectively as members of the Law Society, thus bringing into one Act in up-to-date form all the statutory provisions that govern the Law Society and its members.

These Acts have not been revised since 1912 and are now in many respects out of date.

There are three complementary Bills:

1. Bill 8, *An Act to amend The Solicitors Act*.
2. Bill 9, *An Act to amend The Barristers Act*.
3. Bill 10, *An Act to amend The Notaries Act, 1962-63*.

Attention is drawn to the following highlights in this Bill:

1. The Law Society of Upper Canada is continued as a corporation with that name but, instead of the corporation having only the Treasurer and the other benchers as members, all members of the Society (i.e. all lawyers) will be members of the corporation. See section 2.
2. A new provision will require annual meetings of the members to be held. See section 3.
3. The Law Society is subject to *The Corporations Act* by reason of the provisions of the latter. There are two exceptions to this general rule expressly made in section 6 of this Bill. Section 75a of *The Corporations Act* deals with proxies and section 326 authorizes the Lieutenant Governor to terminate for cause the existence of a corporation.
4. Section 9 is new. It is exactly the same in principle as section 6 of *The Professional Engineers Act, 1968-69* and section 30 of *The Surveyors Act, 1968-69*.
5. The provisions with respect to honorary benchers are unchanged in principle. See section 11.
6. The provisions respecting *ex officio* benchers are changed in principle as follows:
 - (1) All present *ex officio* benchers are continued. See section 16.
 - (2) In 1971 all *ex officio* benchers lose their right to vote in Convocation and in committee except former Treasurers who retain these rights until they reach the age of seventy-five. See sections 12 (2) and 13.
 - (3) Those who are elected as benchers at four elections and who serve for sixteen years become *ex officio* benchers, or, if they so choose, they may stand for re-election. See section 12 (1) and section 12 (3).
7. The responsibilities and powers of the Minister of Justice and Attorney General in his capacity as an *ex officio* bencher are spelled out. See section 13.

8. Starting in 1971, a general election of benchers will be held every four years instead of every five years. See section 15 (1).
9. Starting in 1971, forty benchers will be elected instead of thirty. See section 15 (1).
10. With reference to the election of benchers, twenty are to be elected from within Metropolitan Toronto and twenty from outside. Almost exactly one-half of the profession have their addresses on the Law Society's records in Metropolitan Toronto and in order to carry on the work of the Law Society, particularly the work of the Discipline Committee, it is necessary that approximately one-half of the benchers be readily available for meetings. It is considered to be equally important that at least one-half of the elected benchers should be from outside Metropolitan Toronto. The rules will provide for two separate ballots, one for the twenty benchers to be elected from within Metropolitan Toronto and one for the twenty benchers to be elected from outside Metropolitan Toronto. All members of the profession will be at liberty to vote on each ballot as it is felt that the benchers should be elected by the profession as a whole. See section 15 (2, 3).
11. The composition of a quorum is restricted to benchers who are present and entitled to vote. See section 24.
12. A Law Society Council is created, comprising representatives of the Law Society, of the county and district law associations, of the Canadian Bar Association, of the faculties of the law schools in Ontario, of the junior bar, and of the student members, together with three persons who are not members of the Law Society to be appointed by the Lieutenant Governor in Council. This Council will consider policy matters affecting the legal profession as a whole and the manner in which the members generally are discharging their obligations to the public. See section 26.
13. A number of basic provisions respecting admission to the Society, heretofore in the rules, are transferred to the Act. See section 27.
14. The status of the members of the Society as such is clarified and up-dated. See section 28.
15. The status of lawyers as officers of the courts is extended and clarified. See section 29.
16. The position of members of the Society who are appointed to judicial office is clarified. See section 31.
17. A number of basic provisions respecting discipline, heretofore in the rules, are transferred to and extended in the Act. See sections 33, 34.
18. The governing body is authorized to suspend the membership of any lawyer who is found after due inquiry to be incapable of practising law by reason of age, physical or mental illness, including addiction to alcohol or drugs, or other cause. See section 35.
19. An appeal from the discipline committee to Convocation is provided in minor disciplinary matters. See section 39. Sub-section 4 disqualifies committee members who took part in the original proceedings from taking part in the appeal.
20. A new provision authorizes the Society to reimburse a member who has been subjected to unwarranted disciplinary proceedings for his costs. See section 41.
21. Provision is made for the appointment of a trustee in proper cases temporarily to carry on and wind up the practice of a member of the Society who is disbarred, dies, has absconded, or is incapacitated as a consequence of which he is unable to practise, or where his practice is neglected. See section 43.

22. A general right of appeal to the Court of Appeal is provided from all disciplinary decisions of Convocation and decisions refusing admission, etc. See section 44.
23. A new subsection provides for a stay of a decision or order appealed against pending the disposition of the appeal. See section 45 (2).
24. A new subsection is designed to clarify the Society's right to reimbursement from a bankrupt's estate in compensation cases. See section 51 (9).
25. A new section provides for indemnity for professional liability. See section 53.
26. The rule-making powers of the governing body are clarified and up-dated. See section 54.
27. A rule is authorized under which out-of-Ontario lawyers may be allowed to appear occasionally in the courts of Ontario. See section 54 (1), par. 24.
28. Matters of concern to the public are taken out of the rules and made matters for regulations, which are not effective unless approved by the Lieutenant Governor in Council. These regulations will come under *The Regulations Act* and therefore must be filed with the Registrar of Regulations and published in *The Ontario Gazette*. See section 55.

In preparing this revision most of the applicable recommendations of the Royal Commission Inquiry into Civil Rights with respect to self-governing bodies have been adopted.

Although the likelihood of inaccuracies occurring in a tabular summary such as follows is obvious because of over-simplification, it may perhaps be said that four of the thirty-one recommendations of the McRuer Report are not in any way applicable to the subject-matter of this Bill. Of the remaining twenty-seven recommendations, twenty-three are adopted (five with additions, variations, in part, etc.) and four are not adopted.

<u>McRuer Recommendation</u>	<u>Section of Bill</u>
(Vol. 3, pp. 1209-1211)	
1. Not applicable.	
2. Not adopted, but see ss. 14 and 27.	
3. Not applicable.	
4. Not adopted.	ss. 28 (b) (c), 32
5. Not adopted.	
6. Adopted.	s. 39 (4)
7. Not applicable.	
8. Adopted with variation.	ss. 34, 37, 38.
9. Adopted.	s. 55 par. 4
10. Adopted.	s. 33 (13)
11. Adopted.	s. 33 (3)
12. Adopted.	s. 33 (4)

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|---|--------------|
| 13. Adopted. | s. 33 (8) |
| 14. This principle now followed;
will be continued. | |
| 15. Adopted as to counsel; not
adopted as to agent. | s. 33 (6) |
| 16. Adopted. | ss. 34-38 |
| 17. This principle now followed;
no change contemplated. | |
| 18. Adopted. | s. 50 (2) |
| 19. First part, not adopted;
second part, adopted. | s. 40 |
| 20. Adopted. | s. 41 |
| 21. Adopted with variation. | s. 45 (2) |
| 22. Adopted. | s. 27 (3) |
| 23. Adopted. | ss. 39, 44. |
| 24. Will be adopted. | |
| 25. Adopted. | s. 55 par. 1 |
| 26. Adopted. | s. 54 |
| 27. Adopted, but see s. 56 par. 6. | |
| 28. Adopted so far as practicable. | |
| 29. Not adopted. | |
| 30. Not adopted. | |
| 31. Not applicable. | |

BILL 7

1970

An Act to consolidate and revise The Law Society Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,

Interpre-
tation

- (a) "bencher" means a bencher of the Society;
- (b) "Convocation" means a general or special meeting of the benchers convened for the purpose of transacting business of the Society;
- (c) "member" means a member of the Society and includes a life member but does not include an honorary member or a student member;
- (d) "regulations" means the regulations made under this Act;
- (e) "rules" means the rules made under this Act;
- (f) "Secretary" means the Secretary of the Society;
- (g) "Society" means The Law Society of Upper Canada;
- (h) "Treasurer" means the Treasurer of the Society.
R.S.O. 1960, c. 207, s. 1, *amended*.

THE SOCIETY

2. The Law Society of Upper Canada authorized to be established by an Act of the Parliament of Upper Canada passed in the thirty-seventh year of the reign of his late Majesty George III and incorporated by an Act of the Parliament of Upper Canada passed in the second year of the reign of his late Majesty George IV is hereby continued as a corporation without share capital composed of the Treasurer, the benchers and the other members from time to time.
R.S.O. 1960, c. 207, s. 2, *part, amended*.

Society
continued
1797, c. 13
1822, c. 5

Annual
meeting

3. A meeting of the members shall be held annually at such place and at such time as is determined from time to time in Convocation, notice of which shall be given by publication as provided by the rules. *New.*

Seat

4. The permanent seat of the Society shall continue to be at Osgoode Hall in the City of Toronto. *New.*

Acquisition
and
disposition
of property

5.—(1) The Society may purchase, acquire, take by gift, bequest, devise, donation, or otherwise any real or personal property for its purposes, and it may hold, sell, mortgage, lease, or dispose of any of its real or personal property. R.S.O 1960, c. 207, s. 2, *amended.*

Trustee
powers

(2) The Society has and may exercise all powers of trustees under the laws of Ontario.

Borrowing
power

(3) The Society may borrow money for its purposes. *New.*

R.S.O. 1960,
c. 71,
ss. 75a, 326
not to apply

6.—(1) Sections 75a and 326 of *The Corporations Act* do not apply to the Society.

Conflict

(2) In the event of conflict between any provision of this Act and any provision of *The Corporations Act*, the provision of this Act prevails. *New.*

Treasurer

7. The Treasurer is the president and head of the Society. *New.*

Secretary

8. The Secretary is the chief administrative officer of the Society. *New.*

Liability
of benchers,
officers and
employees

9. No action or other proceedings for damages shall be instituted against the Treasurer or any bencher, official of the Society, or person appointed in Convocation for any act done in good faith in the performance or intended performance of any duty or in the exercise or in the intended exercise of any power under this Act, a regulation or a rule, or for any neglect or default in the performance or exercise in good faith of any such duty or power. *New.*

BENCHERS

Government
of the
Society

10. The benchers shall govern the affairs of the Society, including the call of persons to practise at the bar of the courts of Ontario and their admission and enrolment to practise as solicitors in Ontario. *New.*

Honorary
benchers

11. Every person,

(a) who is an honorary bencher on the day this Act comes into force; or

(b) who after that day is made an honorary bencher,
is an honorary bencher but as such has only the rights and
privileges prescribed by the rules. *New.*

12.—(1) The following, if and while they are members, are ^{*Ex officio*}
ex officio benchers:

1. The Minister of Justice and Attorney General for Canada.
2. The Solicitor General for Canada.
3. The Minister of Justice and Attorney General for Ontario and every person who has held that office or the office of Attorney General for Ontario.
4. Every retired judge of the Supreme Court of Canada or of the Exchequer Court of Canada who was at the time of his appointment a member of the bar of Ontario and who became an *ex officio* bencher under paragraph 5 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964. ^{R.S.O. 1960, c. 207}
5. Every retired judge of the Supreme Court of Ontario who became an *ex officio* bencher under paragraph 6 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964.
6. Every person who was elected a bencher at four quinquennial elections and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as that paragraph was before it was re-enacted in 1964.
7. Every person who was elected a bencher at three quinquennial elections and served as a bencher for fifteen years and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as re-enacted in 1964. 1964, c. 54, s. 1, *amended*.
8. Every person who is elected a bencher at three elections and serves as a bencher for fifteen years before the election in 1975. *New.*
9. Every person who is elected a bencher at four elections and who serves as a bencher for sixteen years. 1964, c. 54, s. 1 (2), *part, amended*.

(2) An *ex officio* bencher under subsection 1 has all the rights and privileges prescribed by the rules, except that after the election of benchers in 1971 he no longer shall have the right to vote in Convocation or in a committee. *New.* ^{Rights and privileges}

Attorney
General
has vote

(3) Notwithstanding subsection 2, an *ex officio* benchler under paragraph 3 of subsection 1 has the right to vote in Convocation and in a committee.

Option

(4) An elected benchler who becomes qualified as an *ex officio* benchler under subsection 1 may, if he chooses, continue as an elected benchler and is eligible to be re-elected in any subsequent election of benchlers without prejudice to his right to become an *ex officio* benchler at any time so long as he is still an elected benchler. *New.*

Minister of
Justice,
guardian of
the public
interest

13.—(1) The Minister of Justice and Attorney General for Ontario shall serve as the guardian of the public interest in all matters within the scope of this Act or having to do with the legal profession in any way, and for this purpose he may at any time require the production of any document, paper, record or thing pertaining to the affairs of the Society.

Admissions

(2) No admission of any person in any document, paper, record or thing produced under subsection 1 is admissible in evidence against that person in any proceedings other than disciplinary proceedings under this Act.

Protection
of Minister

(3) No person who is or has been the Minister of Justice and Attorney General for Ontario is subject to any disciplinary proceedings of the Society or to any penalty imposed in Convocation or in a committee of benchlers for anything done by him while exercising the functions of such office. *New.*

Treasurers
and former
Treasurers
are *ex officio*
benchlers

14.—(1) Every member who has been or is elected to the office of Treasurer is an *ex officio* benchler with all the rights and privileges of an elected benchler. 1964, c. 54, s. 1 (2), *part, amended.*

Rights and
privileges

(2) Every *ex officio* benchler under subsection 1 shall, upon attaining the age of seventy-five years, continue to be an *ex officio* benchler with all the rights and privileges prescribed by the rules, except that he no longer shall have the right to vote in Convocation or in a committee. *New.*

Election of
benchlers

15.—(1) An election of benchlers shall be held in 1971 and in every fourth year thereafter at each of which forty benchlers shall be elected by secret ballot from and by the members in accordance with this Act and the rules. R.S.O. 1960, c. 207, s. 8 (1), *part, amended.*

Area repre-
sentation

(2) Twenty of the forty benchlers mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are within The Municipality of Metropolitan Toronto as it is constituted on that day.

(3) Twenty of the forty benchers mentioned in subsection 1 ^{Idem} shall be members whose addresses on the records of the Society on the last day for nominations are outside The Municipality of Metropolitan Toronto as it is constituted on that day. *New.*

16. The benchers elected at the election of benchers in 1966 ^{Present benchers continue} or thereafter shall continue in office until those elected at the election of benchers in 1971 take office. *New.*

17. Every member in good standing and not in arrear to the Society for any fee or levy is an elector qualified to vote ^{Who may vote} at an election of benchers. R.S.O. 1960, c. 207, s. 9, *amended.*

18. No member is eligible to be a candidate for bencher ^{Qualification of candidates} at any election who is not qualified to vote at the election. R.S.O. 1960, c. 207, s. 11, *amended.*

19. Any bencher is eligible for re-election. R.S.O. 1960, ^{Benchers may be re-elected} c. 207, s. 12, *amended.*

20. Any member who was qualified to vote at an election ^{Election petitions} of benchers may, in accordance with the rules, petition Convocation against the election of any bencher. R.S.O. 1960, c. 207, s. 30, *part, amended.*

21. The elected benchers shall take office at the first general ^{Taking office} Convocation following their election and, subject to this Act, shall hold office until their successors take office. R.S.O. 1960, c. 207, s. 28, *amended.*

22.—(1) Where there is a failure to elect the requisite ^{Making up deficiency} number of qualified benchers, the remaining benchers shall as soon as convenient supply the deficiency by electing in Convocation the requisite number of qualified members as benchers.

(2) Where there is a vacancy in the requisite number of ^{Filling of vacancy} benchers, the remaining benchers shall as soon as convenient fill the vacancy by electing in Convocation a qualified member as a bencher to fill the vacancy, but where at the last quadrennial election of benchers there were more qualified candidates than benchers to be elected, the remaining benchers shall as soon as convenient fill the vacancy by electing in Convocation as a bencher the qualified member who among the defeated candidates at such election received the greatest number of votes.

(3) The benchers elected under this section shall, subject ^{Term of office} to this Act, hold office until their successors take office. R.S.O. 1960, c. 207, s. 34, *amended.*

Removal
for non-
attendance

23. The benchers may remove from office any elected bencher who fails to attend six consecutive general Convocations. R.S.O. 1960, c. 207, s. 29 (1), *amended*.

Quorum

24.—(1) Except as provided by subsection 2, ten benchers present and entitled to vote in Convocation constitute a quorum for the transaction of business.

Idem,
disciplinary
matters

(2) No disciplinary matter shall be dealt with in Convocation unless fifteen or more benchers are present and entitled to vote. *New*.

Election of
Treasurer

25.—(1) The benchers shall annually at the general Convocation in the month of May, or at such other time as the benchers may fix, elect one of their number as Treasurer.

Treasurer
eligible for
re-election

(2) The Treasurer is eligible for re-election. R.S.O. 1960, c. 207, s. 33, *amended*.

LAW SOCIETY COUNCIL

Law Society
Council,
duties

26.—(1) There shall be a body known as the "Law Society Council" to consider the manner in which the members of the Society are discharging their obligations to the public and generally matters affecting the legal profession as a whole.

Composition

(2) The Law Society Council shall be composed of,

- (a) the Treasurer;
- (b) the chairman and the vice-chairman of each standing committee;
- (c) the vice-president for Ontario of the Canadian Bar Association;
- (d) the president of each county or district law association or his nominee, being a member of his association;
- (e) one member who is a full-time teacher at a law school in Ontario approved by the Society, to be appointed annually by the faculty of the law school;
- (f) two student members elected annually by the student members attending the teaching period of the Bar Admission Course;
- (g) three members who have been members of the Society for not more than ten years appointed by the annual meeting of the Ontario Section of the Canadian Bar Association; and

- (h) nine persons, not being members of the Society, appointed by the Lieutenant Governor in Council for such terms as he sees fit.

(3) The Council shall meet at least twice a year and shall ^{Meetings and report} report after each meeting to the Lieutenant Governor in Council and to Convocation.

(4) The first order of business at the first meeting of the ^{Chairman} Council in any year is to elect a chairman.

(5) The Council may make such rules, procedural or other- ^{Rules} wise, as it considers appropriate for the proper conduct of its affairs.

(6) The administrative cost and all expenses of the Council ^{Cost} shall be borne and paid by the Society.

(7) The Secretary shall send to the Council as of the last ^{Half-yearly report} days of June and December in each year a statement containing, with respect to the immediately preceding six-month period, the names and addresses of the persons whose applications for admission to the Society as members or student members have been refused and giving, in each case, the reason for the refusal, together with such further information and particulars with respect to such matters as the Council may require. *New.*

ADMISSION OF MEMBERS

27.—(1) Every application for admission to the Society ^{Form of applications} shall be on the prescribed form and be accompanied by the prescribed fees.

(2) An applicant for admission to the Society must be ^{Good character} of good character.

(3) No applicant for admission to the Society who has ^{Where no refusal} met all admission requirements shall be refused admission.

(4) No application for admission to the Society shall be ^{Appearance before refusal} refused until the applicant has been given an opportunity to appear in person before a committee of benchers.

(5) Where an applicant for admission to the Society is ^{Statement of reasons} refused admission, he is entitled to a statement of the reasons for the refusal.

(6) Where an application for admission to the Society has ^{Subsequent applications} been refused, another application based on new evidence may be made at any time *New.*

CLASSES OF MEMBERS

Classes of
members**28.** Subject to sections 30, 31, 32, 34, 35, 36 and 38,honorary
members

(a) the persons,

- (i) who are honorary members of the Society on the day this Act comes into force, or
- (ii) who after that day are made honorary members of the Society,

are honorary members with only the rights and privileges prescribed by the rules;

life
members

(b) the persons, being Canadian citizens or other British subjects,

- (i) who are honorary life members on the day this Act comes into force, or
- (ii) who after that day become life members,

are life members with the rights and privileges of members, and such additional rights and privileges as are prescribed by the rules;

members

(c) the persons, being Canadian citizens or other British subjects,

- (i) who are members on the day this Act comes into force, or
- (ii) who after that day successfully complete the Bar Admission Course and are called to the bar and admitted and enrolled as solicitors, or
- (iii) who after that day transfer from a jurisdiction outside Ontario and are called to the bar and admitted and enrolled as solicitors,

are members and entitled to practise law in Ontario as barristers and solicitors;

student
members

(d) the persons,

- (i) who are students-at-law in the Bar Admission Course on the day this Act comes into force, or
- (ii) who after that day become students-at-law in the Bar Admission Course,

are student members with the rights and privileges prescribed by the rules. R.S.O. 1960, c. 207, s. 4, *amended*.

29. Every member is an officer of every court of record in Ontario. Members
are officers
of the
courts

30.—(1) A member or student member may make application to resign from the Society, and Convocation may accept the resignation of such member or student member whereupon all his rights and privileges as a member or student member, as the case may be, cease. Resignation

(2) Any former member or student member may make application for readmission as a member or student member, as the case may be, and Convocation may readmit such former member or student member. *New.* Re-
admission

31. The membership of any member or former member who has assumed office or hereafter assumes office as, Effect of
appoint-
ment to
Bench

(a) a full-time judge under any Act of the Parliament of Canada; or

(b) a full-time judge under *The Provincial Courts Act, 1968, c. 103*, *1968 or The Division Courts Act*; or R.S.O. 1960,
c. 110

(c) the Senior Master or a full-time master or a full-time assistant master or a full-time local master of the Supreme Court or a full-time taxing officer,

is, while he continues in any such office, in abeyance, and, upon his ceasing to hold such office, shall be restored by his giving notice in writing to such effect to the Secretary. *New.*

32.—(1) When a member ceases to be a Canadian citizen or other British subject, he ceases to be a member. Effect of
losing
Canadian
citizenship

(2) Any person whose membership terminated under subsection 1 may, upon again becoming a Canadian citizen or other British subject, make application for readmission as a member and Convocation may readmit him. *New.* Re-
admission

DISCIPLINE

33.—(1) No disciplinary action under section 34, 35, 37 or 38 shall be taken unless, Complaint
and hearing

(a) a complaint under oath has been filed in the office of the Secretary and a copy thereof has been served on the person whose conduct is being investigated;

- (b) the person whose conduct is being investigated has been served with a notice of the time and place of the hearing; and
- (c) a committee of benchers has heard evidence of or on behalf of the complainant and, if the person whose conduct is being investigated appears at the hearing and so requests, has heard his evidence and any evidence on his behalf and has reached the decision that he is guilty.

Power to
take sworn
evidence

(2) Any person presiding at a hearing may administer oaths to witnesses and require them to give evidence under oath.

Failure to
appear

(3) If the person whose conduct is being investigated fails to appear in answer to the notice at the time and place appointed, the hearing may be conducted in his absence.

Disciplinary
hearings
to be held
in camera

(4) Hearings shall be held *in camera*, but if the person whose conduct is being investigated requests otherwise by a notice in writing delivered to the Secretary before the day fixed for the hearing, the committee may conduct the hearing in public or otherwise as it considers proper.

Adjourn-
ments

(5) A hearing may be adjourned at any time and from time to time.

Attendance
of person
being
investigated

(6) A person whose conduct is being investigated, if present in person at the hearing, has the right to be represented by counsel, to adduce evidence and to make submissions, and any such person may be compelled to attend and give evidence in the manner provided in subsection 10, but such person shall be advised of his right to object to answer any question under section 9 of *The Evidence Act* and section 5 of the *Canada Evidence Act*.

R.S.O. 1960,
c. 125
R.S.C. 1952,
c. 307

Examina-
tion and
cross-
examination

(7) At a hearing, the complainant and the person whose conduct is being investigated have the right to examine the witnesses called by them respectively, and to cross-examine the witnesses opposed in interest, including the deponent of an affidavit or a statutory declaration submitted in evidence.

Hearing of
evidence
R.S.O. 1960,
c. 125

(8) The oral evidence submitted at a hearing shall be taken down in writing or by any other method authorized by *The Evidence Act*.

Rules of
evidence

(9) The rules of evidence applicable in civil proceedings are applicable at a hearing, except that an affidavit or statutory declaration of any person is admissible in evidence as *prima facie* proof of the statements made therein.

(10) The Treasurer, the chairman or a vice-chairman of a committee of benchers, or the Secretary may, and the Secretary upon application of a person whose conduct is being investigated shall, issue a summons in the prescribed form commanding the attendance and examination of any person as a witness, and the production of any document or thing, the production of which could be compelled at the trial of an action, before the committee of benchers at the time and place mentioned in the summons and stating that failure to obey the summons will render the person liable to imprisonment on an application to the Supreme Court, but the person whose attendance is required is entitled to the like conduct money and payment for expenses and loss of time as upon attendance as a witness at a trial in the Supreme Court.

Summons
to witness

(11) If any person,

Failure of
witness to
appear, etc.

- (a) on being duly summoned to appear as a witness makes default in attending; or
- (b) being in attendance as a witness refuses to take an oath legally required to be taken, or to produce any document or thing in his power or control legally required to be produced by him, or to answer any question which he is legally required to answer; or
- (c) does any other thing which would, if the committee had been a court of law having power to commit for contempt, have been contempt of that court,

the person presiding at the hearing may certify the offence of that person under his hand to the Supreme Court and the court may thereupon inquire into the alleged offence and after hearing any witnesses who may be produced against or on behalf of the person charged with the offence, and after hearing any submissions that may be offered in defence, punish or take steps for the punishment of that person in the like manner as if he had been guilty of contempt of court.

(12) The decision taken after a hearing shall be in writing and shall contain or be accompanied by the reasons for the decision in which are set out the findings of fact and the conclusions of law, if any, based thereon, and a copy of the decision and the reasons therefor, together with a notice to the person whose conduct is being investigated of his right of appeal, shall be served upon him within thirty days after the date of the decision.

Decision

(13) Any document required to be served under this Act upon a person whose conduct is being investigated shall be served personally upon him or by mailing a copy thereof in a

Service of
documents

registered letter addressed to him at his last known residence or office address as shown by the records of the Society, and service shall be effected not less than ten days before the date of the hearing or the event or thing required to be done, as the case may be, and proof by affidavit of the service is sufficient. *New.*

Disbar-
ment, etc.,
for
misconduct

34. If a member is found guilty of professional misconduct or of conduct unbecoming a barrister and solicitor after due investigation by a committee of benchers, Convocation may by order cancel his membership in the Society by disbarring him as a barrister and striking his name off the roll of solicitors or may by order suspend his rights and privileges as a member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (1), *amended.*

Suspension
for
incapacity

35. If a member has been found pursuant to any Act to be mentally incompetent or mentally ill, or has been found after due inquiry by a committee of benchers incapable of practising law as a barrister and solicitor by reason of age, physical or mental illness including addiction to alcohol or drugs, or any other cause, Convocation may by order limit or suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *amended.*

Suspension
for failure
to pay
fees

36. If a member fails to pay any fee or levy payable by him to the Society within four months after the day on which payment was due, Convocation may by order suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *part, amended.*

Reprimand
in committee
for
misconduct

37. If a committee of benchers finds that a member has been guilty of professional misconduct or conduct unbecoming a barrister and solicitor which in its opinion does not warrant disbarment, suspension or reprimand in Convocation, the committee may by order reprimand him. *New.*

Student
members'
misconduct

38. If a student member is found after due inquiry by a committee of benchers guilty of conduct unbecoming a student member, the committee may by order reprimand him or Convocation may by order cancel his student membership or may by order suspend his rights and privileges as a student member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (2), *amended.*

39.—(1) Any member who has been found guilty under section 37 or any student member who has been found guilty under section 38 and, in either case, has been ordered to be reprimanded in committee, may appeal from the order of reprimand to Convocation within fifteen days from the day upon which he is served with the order of the committee. Appeal to Convocation

(2) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy of the proceedings before the committee, the evidence taken, the committee's report and all decisions, findings and orders of the committee in the matter. Procedure and record

(3) Upon the hearing of an appeal under this section, Convocation may vary the punishment imposed by the committee or may refer the matter or any part thereof back to a committee with such directions as it considers proper or may make such order as it considers proper in the circumstances. Orders

(4) No benchers who sat on the committee of benchers when the order appealed from was made shall take any part in the hearing of the appeal in Convocation. Disqualification

(5) Subject to section 44, the decision of Convocation under this section is final and not subject to any further appeal. *New.* Decision final

40. A person whose membership or student membership has been cancelled or whose rights and privileges as a member or student member have been suspended or who has been reprimanded may be ordered to pay the expense, or part of the expense, incurred by the Society in the investigation or hearing of any complaint in respect of which he has been found guilty. R.S.O. 1960, c. 207, s. 44 (3), *amended*. Expenses of investigations

41. Where it appears that disciplinary proceedings against a member or student member were unwarranted, Convocation may order that such costs as it considers just be paid by the Society to the member or student member whose conduct was the subject of the proceedings. *New.* Costs where disciplinary proceedings unwarranted

42.—(1) If the Treasurer or the Secretary or the chairman or the vice-chairman of any committee of benchers dealing with disciplinary matters has reasonable cause to believe that a member has been or may be guilty of misconduct in connection with any property in his possession or under his control, a judge of the Supreme Court may, upon an *ex parte* application by the Society, order that the property described in the order shall not be paid out or dealt with by the person or persons named in the order without the leave of a judge of the Supreme Court. 1960-61, c. 44, s. 1, *amended*. Stop-orders on members' bank accounts, etc.

Discharge,
etc., of
stop-orders

(2) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. *New.*

Appoint-
ment of
trustees

43.—(1) Where a member or former member dies, disappears or leaves Ontario or a person's membership in the Society is cancelled or his rights and privileges as a member are suspended and, in any such event, his practice is neglected to the prejudice of any person or no provision has been made for the protection of his clients' interests, a judge of the Supreme Court may, upon an *ex parte* application by the Society, by order appoint a person as trustee, with or without bond, to take possession of any property in the possession of or under the control of such member or former member for the purpose of preserving, carrying on or winding up the practice of such member or former member.

Idem

(2) A person appointed under subsection 1 shall, in respect of any trust property of such member or former member, be the trustee thereof, and he shall in respect thereof take the place of the personal representative, committee or other representative, if any, of such member or former member.

Discharge,
etc., of
order

(3) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1.

Fees, etc.,
of trustee

(4) The judge may in any order under this section make provision for the remuneration, disbursements and indemnification of the trustee out of such moneys or otherwise as the judge may specify. *New.*

Appeal to
Court of
Appeal

44.—(1) Any person dissatisfied with a decision of Convocation made under section 30, 32 or 46, or any person against whom an order has been made under section 34, 35 or 36, or any person against whom an order, other than an order of reprimand in committee, has been made under section 38, or any person whose punishment has been ordered to be increased under subsection 3 of section 39 may appeal from the decision or order to the Court of Appeal within fifteen days from the day upon which he is served with the decision or order.

Certified
copies of
papers

(2) Upon the request of any person desiring to appeal and upon payment of the cost thereof, the Secretary shall furnish such person with a certified copy of all proceedings, evidence, reports, orders and papers received as evidence in Convocation and any committee of benchers in dealing with and disposing of the matter complained of.

(3) If the appellant fails to pay the cost of the certified copy ^{Failure to pay costs} and the cost of such additional copies of the evidence as may be reasonably required for the purposes of the appeal within fifteen days after written demand from the Secretary, the appeal shall be deemed to be abandoned.

(4) An appeal under this section shall be by motion, notice ^{Procedure and record} of which shall be served upon the Secretary, and the record shall consist of a copy, certified by the Secretary, of the proceedings before Convocation or any committee of benchers, the evidence taken, the report of Convocation or any committee of benchers and all decisions, findings and orders of Convocation or any committee of benchers in the matter.

(5) Except as otherwise provided, appeals under this section ^{Practice} shall be in accordance with the practice in appeals from the decision or order of a judge of the Supreme Court.

(6) Upon the hearing of an appeal under this section the ^{Orders} Court of Appeal may make such order as the court considers proper or may refer the matter or any part thereof back to Convocation with such directions as the court considers proper.

(7) The Court of Appeal may make such order as to the ^{Costs} costs of the appeal as the court considers proper. *New.*

45.—(1) When a person's membership or student membership is cancelled, all his rights and privileges as a member or student member, as the case may be, cease, or, when a person's membership or student membership is suspended, the member or student member shall, during the period of suspension, possess no rights or privileges as a member or student member. R.S.O. 1960, c. 207, s. 46, *amended*. ^{Effect of cancellation and suspension}

(2) Where an appeal under section 44 is pending, the ^{Where appeal pending} decision or order appealed against shall not thereby be stayed, but an application may be made to a judge of the Court of Appeal for a stay of the decision or order pending the disposition of the appeal, and the judge may dispose of the application as he considers proper and in so doing he may impose such terms and conditions as he considers appropriate. *New.*

46. Where a person's membership or student membership ^{Re-admission} is cancelled, he may apply to be readmitted, and Convocation, after due inquiry by a committee of benchers, may readmit him as a member or student member, as the case may be. *New.*

47. Where the rights and privileges of a member or ^{Termination of suspension} student member are suspended for a definite or indefinite period, he may apply at any time to have his rights and

privileges restored, and Convocation, after due inquiry by a committee of benchers, may restore his rights and privileges as a member or student member, as the case may be. R.S.O. 1960, c. 207, s. 45 (2, 3), *amended*.

Terms and
conditions

48. Upon the readmission of a person as a member or student member or upon the termination of the suspension of the rights and privileges of a member or student member or upon the reprimand of a member or student member, Convocation or a committee of benchers may impose upon him such terms and conditions as it considers proper. *New*.

Notice to
Registrar
of S.C.O.

49. Notice of admission to membership and of any cancellation, suspension, resignation, readmission or other change in a member's status in the Society shall be given forthwith by the Secretary to the Registrar of the Supreme Court who shall keep a record thereof. R.S.O. 1960, c. 207, s. 45, *amended*.

PROHIBITIONS AND OFFENCES

Prohibition
as to
practice, etc.

50.—(1) Except where otherwise provided by law, no person, other than a member whose rights and privileges are not suspended, shall act as a barrister or solicitor or hold himself out as or represent himself to be a barrister or solicitor or practise as a barrister or solicitor. R.S.O. 1960, c. 30, s. 5 (1); R.S.O. 1960, c. 378, s. 6 (1), *amended*.

Offence

(2) Every person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than \$1,000. R.S.O. 1960, c. 30, s. 5 (2); R.S.O. 1960, c. 378, s. 6 (2), *amended*.

Proceedings
to enjoin
person
convicted
from
practising
law

(3) Where a conviction has been made under subsection 2, the Society may apply to a judge of the Supreme Court by originating motion for an order enjoining the person convicted from practising as a barrister or solicitor, and the judge may make the order and it may be enforced in the same manner as any other order or judgment of the Supreme Court. R.S.O. 1960, c. 30, s. 5 (5); R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

Discharge,
etc., of
order

(4) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 3. R.S.O. 1960, c. 30, s. 5 (6), *part*; R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

COMPENSATION FUND

Compensa-
tion Fund

51.—(1) The Society shall continue to maintain the fund known as "the Compensation Fund" and shall continue to hold it in trust for the purposes of this section. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.

(2) The Compensation Fund shall be made up of,

Composition
of Fund

- (a) all moneys paid by members of the Society under subsection 3;
- (b) all moneys earned from the investment of moneys in the Fund;
- (c) all moneys recovered under subsection 7; and
- (d) any moneys contributed by any person. R.S.O. 1960, c. 207, s. 53 (2), *amended*.

(3) Every member, other than those of a class exempted by the rules, shall pay to the Society for the Compensation Fund ^{Compensation Fund levy} such sum as is prescribed from time to time by the rules.

(4) The Society may insure with any insurer licensed to ^{Insurance} carry on business in Ontario for such purposes and on such terms as Convocation considers expedient in relation to the Compensation Fund, and, in such event, the moneys in the Fund may be used for the payment of premiums. R.S.O. 1960, c. 207, s. 53 (3, 4), *amended*.

(5) Convocation in its absolute discretion may make grants ^{Grants} from the Compensation Fund in order to relieve or mitigate loss sustained by any person in consequence of dishonesty on the part of any member in connection with such member's law practice or in connection with any trust of which he was or is a trustee, notwithstanding that after the commission of the act of dishonesty he may have died or ceased to administer his affairs or to be a member. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.

(6) No grant shall be made out of the Compensation Fund ^{Conditions of grants} unless notice in writing of the loss is received by the Secretary within six months after the loss came to the knowledge of the person suffering the loss or within such further time, not exceeding eighteen months, as in any case may be allowed by Convocation. R.S.O. 1960, c. 207, s. 53 (5), *amended*.

(7) If a grant is made under this section, the Society is ^{Subrogation} subrogated to the amount of the grant to any rights or remedies to which the person receiving the grant was entitled on account of the loss in respect of which the grant was made against the dishonest member or any other person, or, in the event of the death or insolvency or other disability of such member or other person, against his personal representative or other person administering his estate. R.S.O. 1960, c. 207, s. 53 (6), *amended*.

Grantees' rights conditionally limited

(8) A person to whom a grant is made under this section, or, in the event of his death or insolvency or other disability, his personal representative or other person administering his estate, has no right to receive anything from the dishonest member or his estate in respect of the loss in respect of which the grant was made until the Society has been reimbursed the full amount of the grant. R.S.O. 1960, c. 207, s. 53 (7).

Reimbursement from bankrupt's estate

(9) Where a grant has been made under this section and the dishonest member has been declared a bankrupt, the Society is entitled to prove against the bankrupt's estate for the full amount of the claim of the person to whom the grant was made and to receive all dividends on such amount until the Society has been reimbursed the full amount of the grant. *New.*

Delegation of powers to committee or referee or both

(10) Convocation may delegate any of the powers conferred upon it by this section to a committee of benchers and, whether or not Convocation has made any such delegation, it may appoint any member as a referee and delegate to him any of the powers conferred upon it by this section that are not delegated to a committee. 1966, c. 79, s. 1, *part, amended.*

Reports

(11) Where Convocation has delegated any of its powers under this section to a committee or to a referee, the committee or referee, as the case may be, shall report as required to Convocation, but where there is a delegation to both a committee and a referee, the referee shall report as required to the committee. 1966, c. 79, s. 1, *part, amended.*

Costs of administration

(12) There may be paid out of the Compensation Fund the costs of its administration, including the costs of investigations and hearings and all other costs, salaries and expenses necessarily incidental to the administration of the Fund. 1964, c. 54, s. 3, *amended.*

LEGAL EDUCATION; DEGREES

Bar Admission Course

52.—(1) The Society may maintain the Bar Admission Course and programs of continuing legal education.

Law degrees

(2) The Society may grant degrees in law. *New.*

INDEMNITY FOR PROFESSIONAL LIABILITY

Indemnity for professional liability

53. The Society may make arrangements for its members respecting indemnity for professional liability and respecting the payment and remission of premiums in connection therewith and prescribing levies to be paid by members or any class thereof and exempting members or any class thereof from all or any part of any such levy. *New.*

RULES

54.—(1) Subject to section 55, Convocation may make ^{Rules} rules relating to the affairs of the Society and, without limiting the generality of the foregoing,

1. providing procedures for the making, amendment and revocation of the rules;
2. prescribing the seal and the coat of arms of the Society;
3. providing for the execution of documents by the Society;
4. respecting the borrowing of money and the giving of security therefor;
5. fixing the financial year of the Society and providing for the audit of the accounts and transactions of the Society;
6. providing for the time and manner of and the methods and procedures for the election of benchers;
7. providing procedures for the election of the Treasurer, the filling of a vacancy in the office of Treasurer, the appointment of an acting Treasurer to act in the Treasurer's absence or inability to act, and prescribing the Treasurer's duties;
8. providing for the appointment of and prescribing the duties of the Secretary, one or more deputy secretaries and assistant secretaries and such other officers as are considered appropriate;
9. respecting Convocation;
10. providing for the establishment, composition, jurisdiction and operation of standing and other committees and delegating to any committee such of the powers and duties of the benchers as may be considered expedient;
11. governing honorary benchers, *ex officio* benchers and honorary members and prescribing their rights and privileges;
12. governing members, life members and student members, and prescribing their rights and privileges;

13. prescribing fees and levies for members and student members or any class of either of them, and providing for the payment and remission thereof and exempting any class of either of them from all or any part of such fees or levies;
14. respecting the Compensation Fund and prescribing the amount of the levy to be paid to the Society for the Fund and exempting any class of members from all or any part of such levy;
15. prescribing oaths for members and student members;
16. providing for the payment to the Society by any member of the cost of any investigation or audit of his books, records, accounts and transactions;
17. providing for and governing meetings of members or representatives of members;
18. prescribing procedures for the call to the bar of barristers and the admission and enrolment of solicitors;
19. defining and governing the employment of student members while under articles;
20. providing and governing bursaries, scholarships, medals and prizes;
21. providing for and governing extension courses, continuing legal education, and legal research;
22. governing degrees in law;
23. providing for and governing libraries;
24. providing for the occasional appearance as counsel in the courts of Ontario and before provincial judges, with the consent of the Treasurer and of the court or judge, of members of the legal profession from outside Ontario;
25. providing for the establishment, maintenance and administration of a benevolent fund for members and the dependants of deceased members;
26. prescribing forms and providing for their use, except the form of summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 207, ss. 24, 35, 40, 41, 42 (1), 43 (*part*), 50, 51, 53 (9), 54 (2, 3), 55, 56 (1), *amended*.

(2) The rules made under subsection 1 shall be interpreted as if they formed part of this Act. Interpretation of rules

(3) A copy of the rules made under subsection 1, as amended from time to time, Availability of copies of rules

(a) shall be filed in the office of the Minister of Justice and Attorney General; and

(b) shall be available for public inspection in the office of the Secretary. *New.*

REGULATIONS

55. Subject to the approval of the Lieutenant Governor in Council, Convocation may make regulations respecting any matter that is outside the scope of the rule-making powers specified in section 54 and, without limiting the generality of the foregoing, Regulations

1. respecting any matter ancillary to the provisions of this Act with regard to the admission, conduct and discipline of members and student members and the suspension and restoration of their rights and privileges, the cancellation of memberships and student memberships, the resignation of members, and the readmission of former members and student members;
2. requiring and prescribing the books, records and accounts to be kept by members and providing for the exemption from such requirements of any class of members;
3. requiring and providing for the examination or audit of members' books, records, accounts and transactions and the filing with the Society of reports with respect thereto;
4. authorizing and providing for the preparation, publication and distribution of a code of professional conduct and ethics.
5. respecting the reporting and publication of the decisions of the courts;
6. defining and governing the employment of barristers and solicitors clerks;
7. respecting legal education, including the Bar Admission Course;

8. providing for the establishment, operation and dissolution of county and district law associations and respecting grants to such associations;
9. prescribing the form of the summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 30, s. 2; R.S.O. 1960, c. 207, s. 43, *part*; R.S.O. 1960, c. 378, s. 3, *amended*.

MISCELLANEOUS

R.S.O. 1960,
c. 207;
1960-61,
c. 44;
1964, c. 54;
1966, c. 79,
repealed

56. *The Law Society Act, The Law Society Amendment Act, 1960-61, The Law Society Amendment Act, 1964 and The Law Society Amendment Act, 1966* are repealed.

Commence-
ment

57. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

58. This Act may be cited as *The Law Society Act, 1970*.

An Act to consolidate and revise The
Law Society Act

1st Reading

February 27th, 1970

2nd Reading

April 14th, 1970

3rd Reading

MR. WISHART

*(Reprinted as amended by the Committee of
the Whole House)*

BILL 7

3RD SESSION, 28TH LEGISLATURE, ONTARIO
19 ELIZABETH II, 1970

An Act to consolidate and revise The Law Society Act

MR. WISHART

BILL 7

1970

An Act to consolidate and revise The Law Society Act

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. In this Act,

Interpre-
tation

- (a) "bencher" means a bencher of the Society;
 - (b) "Convocation" means a general or special meeting of the benchers convened for the purpose of transacting business of the Society;
 - (c) "member" means a member of the Society and includes a life member but does not include an honorary member or a student member;
 - (d) "regulations" means the regulations made under this Act;
 - (e) "rules" means the rules made under this Act;
 - (f) "Secretary" means the Secretary of the Society;
 - (g) "Society" means The Law Society of Upper Canada;
 - (h) "Treasurer" means the Treasurer of the Society.
- R.S.O. 1960, c. 207, s. 1. *amended*.

THE SOCIETY

2. The Law Society of Upper Canada authorized to be established by an Act of the Parliament of Upper Canada passed in the thirty-seventh year of the reign of his late Majesty George III and incorporated by an Act of the Parliament of Upper Canada passed in the second year of the reign of his late Majesty George IV is hereby continued as a corporation without share capital composed of the Treasurer, the benchers and the other members from time to time.

Society
continued
1797, c. 13
1822, c. 5

R.S.O. 1960, c. 207, s. 2, *part, amended*.

Annual
meeting

3. A meeting of the members shall be held annually at such place and at such time as is determined from time to time in Convocation, notice of which shall be given by publication as provided by the rules. *New.*

Seat

4. The permanent seat of the Society shall continue to be at Osgoode Hall in the City of Toronto. *New.*

Acquisition
and
disposition
of property

5.—(1) The Society may purchase, acquire, take by gift, bequest, devise, donation, or otherwise any real or personal property for its purposes, and it may hold, sell, mortgage, lease, or dispose of any of its real or personal property. R.S.O. 1960, c. 207, s. 2, *amended.*

Trustee
powers

(2) The Society has and may exercise all powers of trustees under the laws of Ontario.

Borrowing
power

(3) The Society may borrow money for its purposes. *New.*

R.S.O. 1960,
c. 71,
ss. 75a, 326
not to apply

6.—(1) Sections 75a and 326 of *The Corporations Act* do not apply to the Society.

Conflict

(2) In the event of conflict between any provision of this Act and any provision of *The Corporations Act*, the provision of this Act prevails. *New.*

Treasurer

7. The Treasurer is the president and head of the Society. *New.*

Secretary

8. The Secretary is the chief administrative officer of the Society. *New.*

Liability
of benchers,
officers and
employees

9. No action or other proceedings for damages shall be instituted against the Treasurer or any bencher, official of the Society, or person appointed in Convocation for any act done in good faith in the performance or intended performance of any duty or in the exercise or in the intended exercise of any power under this Act, a regulation or a rule, or for any neglect or default in the performance or exercise in good faith of any such duty or power. *New.*

BENCHERS

Government
of the
Society

10. The benchers shall govern the affairs of the Society, including the call of persons to practise at the bar of the courts of Ontario and their admission and enrolment to practise as solicitors in Ontario. *New.*

Honorary
benchers

11. Every person,

(a) who is an honorary bencher on the day this Act comes into force; or

(b) who after that day is made an honorary bencher,
is an honorary bencher but as such has only the rights and
privileges prescribed by the rules. *New.*

12.—(1) The following, if and while they are members, are *ex officio* ^{benchers} *ex officio* benchers:

1. The Minister of Justice and Attorney General for Canada.
2. The Solicitor General for Canada.
3. The Minister of Justice and Attorney General for Ontario and every person who has held that office or the office of Attorney General for Ontario.
4. Every retired judge of the Supreme Court of Canada or of the Exchequer Court of Canada who was at the time of his appointment a member of the bar of Ontario and who became an *ex officio* bencher under paragraph 5 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964. ^{R.S.O. 1960, c. 207}
5. Every retired judge of the Supreme Court of Ontario who became an *ex officio* bencher under paragraph 6 of section 5 of *The Law Society Act* as that paragraph was before it was repealed in 1964.
6. Every person who was elected a bencher at four quinquennial elections and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as that paragraph was before it was re-enacted in 1964.
7. Every person who was elected a bencher at three quinquennial elections and served as a bencher for fifteen years and became an *ex officio* bencher under paragraph 4 of section 5 of *The Law Society Act* as re-enacted in 1964. 1964, c. 54, s. 1, *amended*.
8. Every person who is elected a bencher at three elections and serves as a bencher for fifteen years before the election in 1975. *New.*
9. Every person who is elected a bencher at four elections and who serves as a bencher for sixteen years. 1964, c. 54, s. 1 (2), *part, amended*.

(2) An *ex officio* bencher under subsection 1 has all the rights and privileges prescribed by the rules, except that after the election of benchers in 1971 he no longer shall have the right to vote in Convocation or in a committee. *New.* ^{Rights and privileges}

Attorney
General
has vote

(3) Notwithstanding subsection 2, an *ex officio* benchers under paragraph 3 of subsection 1 has the right to vote in Convocation and in a committee.

Option

(4) An elected benchers who becomes qualified as an *ex officio* benchers under subsection 1 may, if he chooses, continue as an elected benchers and is eligible to be re-elected in any subsequent election of benchers without prejudice to his right to become an *ex officio* benchers at any time so long as he is still an elected benchers. *New.*

Minister of
Justice,
guardian of
the public
interest

13.—(1) The Minister of Justice and Attorney General for Ontario shall serve as the guardian of the public interest in all matters within the scope of this Act or having to do with the legal profession in any way, and for this purpose he may at any time require the production of any document, paper, record or thing pertaining to the affairs of the Society.

Admissions

(2) No admission of any person in any document, paper, record or thing produced under subsection 1 is admissible in evidence against that person in any proceedings other than disciplinary proceedings under this Act.

Protection
of Minister

(3) No person who is or has been the Minister of Justice and Attorney General for Ontario is subject to any disciplinary proceedings of the Society or to any penalty imposed in Convocation or in a committee of benchers for anything done by him while exercising the functions of such office. *New.*

Treasurers
and former
Treasurers
are *ex officio*
benchers

14.—(1) Every member who has been or is elected to the office of Treasurer is an *ex officio* benchers with all the rights and privileges of an elected benchers. 1964, c. 54, s. 1 (2), *part, amended.*

Rights and
privileges

(2) Every *ex officio* benchers under subsection 1 shall, upon attaining the age of seventy-five years, continue to be an *ex officio* benchers with all the rights and privileges prescribed by the rules, except that he no longer shall have the right to vote in Convocation or in a committee. *New.*

Election of
benchers

15.—(1) An election of benchers shall be held in 1971 and in every fourth year thereafter at each of which forty benchers shall be elected by secret ballot from and by the members in accordance with this Act and the rules. R.S.O. 1960, c. 207, s. 8 (1), *part, amended.*

Area repre-
sentation

(2) Twenty of the forty benchers mentioned in subsection 1 shall be members whose addresses on the records of the Society on the last day for nominations are within The Municipality of Metropolitan Toronto as it is constituted on that day.

(3) Twenty of the forty benchers mentioned in subsection 1 ^{Idem} shall be members whose addresses on the records of the Society on the last day for nominations are outside The Municipality of Metropolitan Toronto as it is constituted on that day. *New.*

16. The benchers elected at the election of benchers in 1966 ^{Present benchers continue} or thereafter shall continue in office until those elected at the election of benchers in 1971 take office. *New.*

17. Every member in good standing and not in arrear to ^{Who may vote} the Society for any fee or levy is an elector qualified to vote at an election of benchers. R.S.O. 1960, c. 207, s. 9, *amended.*

18. No member is eligible to be a candidate for bencher ^{Qualification of candidates} at any election who is not qualified to vote at the election. R.S.O. 1960, c. 207, s. 11, *amended.*

19. Any bencher is eligible for re-election. R.S.O. 1960, ^{Benchers may be re-elected} c. 207, s. 12, *amended.*

20. Any member who was qualified to vote at an election ^{Election petitions} of benchers may, in accordance with the rules, petition Convocation against the election of any bencher. R.S.O. 1960, c. 207, s. 30, *part, amended.*

21. The elected benchers shall take office at the first general ^{Taking office} Convocation following their election and, subject to this Act, shall hold office until their successors take office. R.S.O. 1960, c. 207, s. 28, *amended.*

22.—(1) Where there is a failure to elect the requisite ^{Making up deficiency} number of qualified benchers, the remaining benchers shall as soon as convenient supply the deficiency by electing in Convocation the requisite number of qualified members as benchers.

(2) Where there is a vacancy in the requisite number of ^{Filling of vacancy} benchers, the remaining benchers shall as soon as convenient fill the vacancy by electing in Convocation a qualified member as a bencher to fill the vacancy, but where at the last quadrennial election of benchers there were more qualified candidates than benchers to be elected, the remaining benchers shall as soon as convenient fill the vacancy by electing in Convocation as a bencher the qualified member who among the defeated candidates at such election received the greatest number of votes.

(3) The benchers elected under this section shall, subject ^{Term of office} to this Act, hold office until their successors take office. R.S.O. 1960, c. 207, s. 34, *amended.*

Removal
for non-
attendance

23. The benchers may remove from office any elected bencher who fails to attend six consecutive general Convocations. R.S.O. 1960, c. 207, s. 29 (1), *amended*.

Quorum

24.—(1) Except as provided by subsection 2, ten benchers present and entitled to vote in Convocation constitute a quorum for the transaction of business.

Idem,
disciplinary
matters

(2) No disciplinary matter shall be dealt with in Convocation unless fifteen or more benchers are present and entitled to vote. *New*.

Election of
Treasurer

25.—(1) The benchers shall annually at the general Convocation in the month of May, or at such other time as the benchers may fix, elect one of their number as Treasurer.

Treasurer
eligible for
re-election

(2) The Treasurer is eligible for re-election. R.S.O. 1960, c. 207, s. 33, *amended*.

LAW SOCIETY COUNCIL

Law Society
Council,
duties

26.—(1) There shall be a body known as the "Law Society Council" to consider the manner in which the members of the Society are discharging their obligations to the public and generally matters affecting the legal profession as a whole:

Composition

(2) The Law Society Council shall be composed of,

- (a) the Treasurer;
- (b) the chairman and the vice-chairman of each standing committee;
- (c) the vice-president for Ontario of the Canadian Bar Association;
- (d) the president of each county or district law association or his nominee, being a member of his association;
- (e) one member who is a full-time teacher at a law school in Ontario approved by the Society, to be appointed annually by the faculty of the law school;
- (f) two student members elected annually by the student members attending the teaching period of the Bar Admission Course;
- (g) three members who have been members of the Society for not more than ten years appointed by the annual meeting of the Ontario Section of the Canadian Bar Association; and

- (h) nine persons, not being members of the Society, appointed by the Lieutenant Governor in Council for such terms as he sees fit.

(3) The Council shall meet at least twice a year and shall report after each meeting to the Lieutenant Governor in Council and to Convocation. ^{Meetings and report}

(4) The first order of business at the first meeting of the Council in any year is to elect a chairman. ^{Chairman}

(5) The Council may make such rules, procedural or otherwise, as it considers appropriate for the proper conduct of its affairs. ^{Rules}

(6) The administrative cost and all expenses of the Council shall be borne and paid by the Society. ^{Cost}

(7) The Secretary shall send to the Council as of the last days of June and December in each year a statement containing, with respect to the immediately preceding six-month period, the names and addresses of the persons whose applications for admission to the Society as members or student members have been refused and giving, in each case, the reason for the refusal, together with such further information and particulars with respect to such matters as the Council may require. *New.* ^{Half-yearly report}

ADMISSION OF MEMBERS

27.—(1) Every application for admission to the Society shall be on the prescribed form and be accompanied by the prescribed fees. ^{Form of applications}

(2) An applicant for admission to the Society must be of good character. ^{Good character}

(3) No applicant for admission to the Society who has met all admission requirements shall be refused admission. ^{Where no refusal}

(4) No application for admission to the Society shall be refused until the applicant has been given an opportunity to appear in person before a committee of benchers. ^{Appearance before refusal}

(5) Where an applicant for admission to the Society is refused admission, he is entitled to a statement of the reasons for the refusal. ^{Statement of reasons}

(6) Where an application for admission to the Society has been refused, another application based on new evidence may be made at any time *New.* ^{Subsequent applications}

CLASSES OF MEMBERS

Classes of
members**28.** Subject to sections 30, 31, 32, 34, 35, 36 and 38,honorary
members

(a) the persons,

(i) who are honorary members of the Society on the day this Act comes into force, or

(ii) who after that day are made honorary members of the Society,

are honorary members with only the rights and privileges prescribed by the rules;

life
members

(b) the persons, being Canadian citizens or other British subjects,

(i) who are honorary life members on the day this Act comes into force, or

(ii) who after that day become life members,

are life members with the rights and privileges of members, and such additional rights and privileges as are prescribed by the rules;

members

(c) the persons, being Canadian citizens or other British subjects.

(i) who are members on the day this Act comes into force, or

(ii) who after that day successfully complete the Bar Admission Course and are called to the bar and admitted and enrolled as solicitors, or

(iii) who after that day transfer from a jurisdiction outside Ontario and are called to the bar and admitted and enrolled as solicitors,

are members and entitled to practise law in Ontario as barristers and solicitors;

student
members

(d) the persons,

(i) who are students-at-law in the Bar Admission Course on the day this Act comes into force, or

(ii) who after that day become students-at-law in the Bar Admission Course,

are student members with the rights and privileges prescribed by the rules. R.S.O. 1960, c. 207, s. 4, *amended*.

29. Every member is an officer of every court of record in Ontario. Members are officers of the courts

30.—(1) A member or student member may make application to resign from the Society, and Convocation may accept the resignation of such member or student member whereupon all his rights and privileges as a member or student member, as the case may be, cease. Resignation

(2) Any former member or student member may make application for readmission as a member or student member, as the case may be, and Convocation may readmit such former member or student member. *New.* Re-admission

31. The membership of any member or former member who has assumed office or hereafter assumes office as, Effect of appointment to Bench

(a) a full-time judge under any Act of the Parliament of Canada; or

(b) a full-time judge under *The Provincial Courts Act, 1968* or *The Division Courts Act*; or 1968, c. 103
R.S.O. 1960
c. 110

(c) the Senior Master or a full-time master or a full-time assistant master or a full-time local master of the Supreme Court or a full-time taxing officer,

is, while he continues in any such office, in abeyance, and, upon his ceasing to hold such office, shall be restored by his giving notice in writing to such effect to the Secretary. *New.*

32.—(1) When a member ceases to be a Canadian citizen or other British subject, he ceases to be a member. Effect of losing Canadian citizenship

(2) Any person whose membership terminated under subsection 1 may, upon again becoming a Canadian citizen or other British subject, make application for readmission as a member and Convocation may readmit him. *New.* Re-admission

DISCIPLINE

33.—(1) No disciplinary action under section 34, 35, 37 or 38 shall be taken unless, Complaint and hearing

(a) a complaint under oath has been filed in the office of the Secretary and a copy thereof has been served on the person whose conduct is being investigated;

- (b) the person whose conduct is being investigated has been served with a notice of the time and place of the hearing; and
- (c) a committee of benchers has heard evidence of or on behalf of the complainant and, if the person whose conduct is being investigated appears at the hearing and so requests, has heard his evidence and any evidence on his behalf and has reached the decision that he is guilty.

Power to
take sworn
evidence

(2) Any person presiding at a hearing may administer oaths to witnesses and require them to give evidence under oath.

Failure to
appear

(3) If the person whose conduct is being investigated fails to appear in answer to the notice at the time and place appointed, the hearing may be conducted in his absence.

Disciplinary
hearings
to be held
in camera

(4) Hearings shall be held *in camera*, but if the person whose conduct is being investigated requests otherwise by a notice in writing delivered to the Secretary before the day fixed for the hearing, the committee may conduct the hearing in public or otherwise as it considers proper.

Adjourn-
ments

(5) A hearing may be adjourned at any time and from time to time.

Attendance
of person
being
investigated

(6) A person whose conduct is being investigated, if present in person at the hearing, has the right to be represented by counsel, to adduce evidence and to make submissions, and any such person may be compelled to attend and give evidence in the manner provided in subsection 10, but such person shall be advised of his right to object to answer any question under section 9 of *The Evidence Act* and section 5 of the *Canada Evidence Act*.

R.S.O. 1960,
c. 125
R.S.C. 1952,
c. 307

Examina-
tion and
cross-
examination

(7) At a hearing, the complainant and the person whose conduct is being investigated have the right to examine the witnesses called by them respectively, and to cross-examine the witnesses opposed in interest, including the deponent of an affidavit or a statutory declaration submitted in evidence.

Hearing of
evidence
R.S.O. 1960,
c. 125

(8) The oral evidence submitted at a hearing shall be taken down in writing or by any other method authorized by *The Evidence Act*.

Rules of
evidence

(9) The rules of evidence applicable in civil proceedings are applicable at a hearing, except that an affidavit or statutory declaration of any person is admissible in evidence as *prima facie* proof of the statements made therein.

(10) The Treasurer, the chairman or a vice-chairman of a committee of benchers, or the Secretary may, and the Secretary upon application of a person whose conduct is being investigated shall, issue a summons in the prescribed form commanding the attendance and examination of any person as a witness, and the production of any document or thing, the production of which could be compelled at the trial of an action, before the committee of benchers at the time and place mentioned in the summons and stating that failure to obey the summons will render the person liable to imprisonment on an application to the Supreme Court, but the person whose attendance is required is entitled to the like conduct money and payment for expenses and loss of time as upon attendance as a witness at a trial in the Supreme Court.

Summons
to witness

(11) If any person,

Failure of
witness to
appear, etc.

- (a) on being duly summoned to appear as a witness makes default in attending; or
- (b) being in attendance as a witness refuses to take an oath legally required to be taken, or to produce any document or thing in his power or control legally required to be produced by him, or to answer any question which he is legally required to answer; or
- (c) does any other thing which would, if the committee had been a court of law having power to commit for contempt, have been contempt of that court,

the person presiding at the hearing may certify the offence of that person under his hand to the Supreme Court and the court may thereupon inquire into the alleged offence and after hearing any witnesses who may be produced against or on behalf of the person charged with the offence, and after hearing any submissions that may be offered in defence, punish or take steps for the punishment of that person in the like manner as if he had been guilty of contempt of court.

(12) The decision taken after a hearing shall be in writing and shall contain or be accompanied by the reasons for the decision in which are set out the findings of fact and the conclusions of law, if any, based thereon, and a copy of the decision and the reasons therefor, together with a notice to the person whose conduct is being investigated of his right of appeal, shall be served upon him within thirty days after the date of the decision.

Decision

(13) Any document required to be served under this Act upon a person whose conduct is being investigated shall be served personally upon him or by mailing a copy thereof in a

Service of
documents

registered letter addressed to him at his last known residence or office address as shown by the records of the Society, and service shall be effected not less than ten days before the date of the hearing or the event or thing required to be done, as the case may be, and proof by affidavit of the service is sufficient. *New.*

Disbarment, etc.,
for
misconduct

34. If a member is found guilty of professional misconduct or of conduct unbecoming a barrister and solicitor after due investigation by a committee of benchers, Convocation may by order cancel his membership in the Society by disbarring him as a barrister and striking his name off the roll of solicitors or may by order suspend his rights and privileges as a member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (1), *amended.*

Suspension
for
incapacity

35. If a member has been found pursuant to any Act to be mentally incompetent or mentally ill, or has been found after due inquiry by a committee of benchers incapable of practising law as a barrister and solicitor by reason of age, physical or mental illness including addiction to alcohol or drugs, or any other cause, Convocation may by order limit or suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *amended.*

Suspension
for failure
to pay
fees

36. If a member fails to pay any fee or levy payable by him to the Society within four months after the day on which payment was due, Convocation may by order suspend his rights and privileges as a member for such time and on such terms as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 45 (1), *part, amended.*

Reprimand
in committee
for
misconduct

37. If a committee of benchers finds that a member has been guilty of professional misconduct or conduct unbecoming a barrister and solicitor which in its opinion does not warrant disbarment, suspension or reprimand in Convocation, the committee may by order reprimand him. *New.*

Student
members'
misconduct

38. If a student member is found after due inquiry by a committee of benchers guilty of conduct unbecoming a student member, the committee may by order reprimand him or Convocation may by order cancel his student membership or may by order suspend his rights and privileges as a student member for a period to be named or may by order reprimand him or may by order make such other disposition as it considers proper in the circumstances. R.S.O. 1960, c. 207, s. 44 (2), *amended.*

39.—(1) Any member who has been found guilty under section 37 or any student member who has been found guilty under section 38 and, in either case, has been ordered to be reprimanded in committee, may appeal from the order of reprimand to Convocation within fifteen days from the day upon which he is served with the order of the committee. Appeal to Convocation

(2) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy of the proceedings before the committee, the evidence taken, the committee's report and all decisions, findings and orders of the committee in the matter. Procedure and record

(3) Upon the hearing of an appeal under this section, Convocation may vary the punishment imposed by the committee or may refer the matter or any part thereof back to a committee with such directions as it considers proper or may make such order as it considers proper in the circumstances. Orders

(4) No benchers who sat on the committee of benchers when the order appealed from was made shall take any part in the hearing of the appeal in Convocation. Disqualification

(5) Subject to section 44, the decision of Convocation under this section is final and not subject to any further appeal. *New.* Decision final

40. A person whose membership or student membership has been cancelled or whose rights and privileges as a member or student member have been suspended or who has been reprimanded may be ordered to pay the expense, or part of the expense, incurred by the Society in the investigation or hearing of any complaint in respect of which he has been found guilty. R.S.O. 1960, c. 207, s. 44 (3), *amended*. Expenses of investigations

41. Where it appears that disciplinary proceedings against a member or student member were unwarranted, Convocation may order that such costs as it considers just be paid by the Society to the member or student member whose conduct was the subject of the proceedings. *New.* Costs where disciplinary proceedings unwarranted

42.—(1) If the Treasurer or the Secretary or the chairman or the vice-chairman of any committee of benchers dealing with disciplinary matters has reasonable cause to believe that a member has been or may be guilty of misconduct in connection with any property in his possession or under his control, a judge of the Supreme Court may, upon an *ex parte* application by the Society, order that the property described in the order shall not be paid out or dealt with by the person or persons named in the order without the leave of a judge of the Supreme Court. 1960-61, c. 44, s. 1, *amended*. Stop-orders on members' bank accounts, etc.

Discharge,
etc., of
stop-orders

(2) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1. *New.*

Appoint-
ment of
trustees

43.—(1) Where a member or former member dies, disappears or leaves Ontario or a person's membership in the Society is cancelled or his rights and privileges as a member are suspended and, in any such event, his practice is neglected to the prejudice of any person or no provision has been made for the protection of his clients' interests, a judge of the Supreme Court may, upon an *ex parte* application by the Society, by order appoint a person as trustee, with or without bond, to take possession of any property in the possession of or under the control of such member or former member for the purpose of preserving, carrying on or winding up the practice of such member or former member.

Idem

(2) A person appointed under subsection 1 shall, in respect of any trust property of such member or former member, be the trustee thereof, and he shall in respect thereof take the place of the personal representative, committee or other representative, if any, of such member or former member.

Discharge,
etc., of
order

(3) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 1.

Fees, etc.,
of trustee

(4) The judge may in any order under this section make provision for the remuneration, disbursements and indemnification of the trustee out of such moneys or otherwise as the judge may specify. *New.*

Appeal to
Court of
Appeal

44.—(1) Any person dissatisfied with a decision of Convocation made under section 30, 32 or 46, or any person against whom an order has been made under section 34, 35 or 36, or any person against whom an order, other than an order of reprimand in committee, has been made under section 38, or any person whose punishment has been ordered to be increased under subsection 3 of section 39 may appeal from the decision or order to the Court of Appeal within fifteen days from the day upon which he is served with the decision or order.

Certified
copies of
papers

(2) Upon the request of any person desiring to appeal and upon payment of the cost thereof, the Secretary shall furnish such person with a certified copy of all proceedings, evidence, reports, orders and papers received as evidence in Convocation and any committee of benchers in dealing with and disposing of the matter complained of.

(3) If the appellant fails to pay the cost of the certified copy and the cost of such additional copies of the evidence as may be reasonably required for the purposes of the appeal within fifteen days after written demand from the Secretary, the appeal shall be deemed to be abandoned. ^{Failure to pay costs}

(4) An appeal under this section shall be by motion, notice of which shall be served upon the Secretary, and the record shall consist of a copy, certified by the Secretary, of the proceedings before Convocation or any committee of benchers, the evidence taken, the report of Convocation or any committee of benchers and all decisions, findings and orders of Convocation or any committee of benchers in the matter. ^{Procedure and record}

(5) Except as otherwise provided, appeals under this section shall be in accordance with the practice in appeals from the decision or order of a judge of the Supreme Court. ^{Practice}

(6) Upon the hearing of an appeal under this section the Court of Appeal may make such order as the court considers proper or may refer the matter or any part thereof back to Convocation with such directions as the court considers proper. ^{Orders}

(7) The Court of Appeal may make such order as to the costs of the appeal as the court considers proper. ^{Costs} *New.*

45.—(1) When a person's membership or student membership is cancelled, all his rights and privileges as a member or student member, as the case may be, cease, or, when a person's membership or student membership is suspended, the member or student member shall, during the period of suspension, possess no rights or privileges as a member or student member. ^{Effect of cancellation and suspension} R.S.O. 1960, c. 207, s. 46, *amended*.

(2) Where an appeal under section 44 is pending, the decision or order appealed against shall not thereby be stayed, but an application may be made to a judge of the Court of Appeal for a stay of the decision or order pending the disposition of the appeal, and the judge may dispose of the application as he considers proper and in so doing he may impose such terms and conditions as he considers appropriate. ^{Where appeal pending} *New.*

46. Where a person's membership or student membership is cancelled, he may apply to be readmitted, and Convocation, after due inquiry by a committee of benchers, may readmit him as a member or student member, as the case may be. ^{Re-admission} *New.*

47. Where the rights and privileges of a member or student member are suspended for a definite or indefinite period, he may apply at any time to have his rights and ^{Termination of suspension}

privileges restored, and Convocation, after due inquiry by a committee of benchers, may restore his rights and privileges as a member or student member, as the case may be. R.S.O. 1960, c. 207, s. 45 (2, 3), *amended*.

Terms and conditions

48. Upon the readmission of a person as a member or student member or upon the termination of the suspension of the rights and privileges of a member or student member or upon the reprimand of a member or student member, Convocation or a committee of benchers may impose upon him such terms and conditions as it considers proper. *New*.

Notice to Registrar of S.C.O.

49. Notice of admission to membership and of any cancellation, suspension, resignation, readmission or other change in a member's status in the Society shall be given forthwith by the Secretary to the Registrar of the Supreme Court who shall keep a record thereof. R.S.O. 1960, c. 207, s. 45, *amended*.

PROHIBITIONS AND OFFENCES

Prohibition as to practice, etc.

50.—(1) Except where otherwise provided by law, no person, other than a member whose rights and privileges are not suspended, shall act as a barrister or solicitor or hold himself out as or represent himself to be a barrister or solicitor or practise as a barrister or solicitor. R.S.O. 1960, c. 30, s. 5 (1); R.S.O. 1960, c. 378, s. 6 (1), *amended*.

Offence

(2) Every person who contravenes any provision of subsection 1 is guilty of an offence and on summary conviction is liable to a fine of not more than \$1,000. R.S.O. 1960, c. 30, s. 5 (2); R.S.O. 1960, c. 378, s. 6 (2), *amended*.

Proceedings to enjoin person convicted from practising law

(3) Where a conviction has been made under subsection 2, the Society may apply to a judge of the Supreme Court by originating motion for an order enjoining the person convicted from practising as a barrister or solicitor, and the judge may make the order and it may be enforced in the same manner as any other order or judgment of the Supreme Court. R.S.O. 1960, c. 30, s. 5 (5); R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

Discharge, etc., of order

(4) Any person may apply to a judge of the Supreme Court for an order varying or discharging any order made under subsection 3. R.S.O. 1960, c. 30, s. 5 (6), *part*; R.S.O. 1960, c. 378, s. 6 (5), *part, amended*.

COMPENSATION FUND

Compensation Fund

51.—(1) The Society shall continue to maintain the fund known as "the Compensation Fund" and shall continue to hold it in trust for the purposes of this section. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.

(2) The Compensation Fund shall be made up of,

Composition
of Fund

- (a) all moneys paid by members of the Society under subsection 3;
- (b) all moneys earned from the investment of moneys in the Fund;
- (c) all moneys recovered under subsection 7; and
- (d) any moneys contributed by any person. R.S.O. 1960, c. 207, s. 53 (2), *amended*.

(3) Every member, other than those of a class exempted by the rules, shall pay to the Society for the Compensation Fund such sum as is prescribed from time to time by the rules.

Compensation
Fund
levy

(4) The Society may insure with any insurer licensed to carry on business in Ontario for such purposes and on such terms as Convocation considers expedient in relation to the Compensation Fund, and, in such event, the moneys in the Fund may be used for the payment of premiums. R.S.O. 1960, c. 207, s. 53 (3, 4), *amended*.

Insurance

(5) Convocation in its absolute discretion may make grants from the Compensation Fund in order to relieve or mitigate loss sustained by any person in consequence of dishonesty on the part of any member in connection with such member's law practice or in connection with any trust of which he was or is a trustee, notwithstanding that after the commission of the act of dishonesty he may have died or ceased to administer his affairs or to be a member. R.S.O. 1960, c. 207, s. 53 (1), *part, amended*.

Grants

(6) No grant shall be made out of the Compensation Fund unless notice in writing of the loss is received by the Secretary within six months after the loss came to the knowledge of the person suffering the loss or within such further time, not exceeding eighteen months, as in any case may be allowed by Convocation. R.S.O. 1960, c. 207, s. 53 (5), *amended*.

Conditions
of grants

(7) If a grant is made under this section, the Society is subrogated to the amount of the grant to any rights or remedies to which the person receiving the grant was entitled on account of the loss in respect of which the grant was made against the dishonest member or any other person, or, in the event of the death or insolvency or other disability of such member or other person, against his personal representative or other person administering his estate. R.S.O. 1960, c. 207, s. 53 (6), *amended*.

Subrogation

Grantees' rights conditionally limited

(8) A person to whom a grant is made under this section, or, in the event of his death or insolvency or other disability, his personal representative or other person administering his estate, has no right to receive anything from the dishonest member or his estate in respect of the loss in respect of which the grant was made until the Society has been reimbursed the full amount of the grant. R.S.O. 1960, c. 207, s. 53 (7).

Reimbursement from bankrupt's estate

(9) Where a grant has been made under this section and the dishonest member has been declared a bankrupt, the Society is entitled to prove against the bankrupt's estate for the full amount of the claim of the person to whom the grant was made and to receive all dividends on such amount until the Society has been reimbursed the full amount of the grant. *New.*

Delegation of powers to committee or referee or both

(10) Convocation may delegate any of the powers conferred upon it by this section to a committee of benchers and, whether or not Convocation has made any such delegation, it may appoint any member as a referee and delegate to him any of the powers conferred upon it by this section that are not delegated to a committee. 1966, c. 79, s. 1, *part, amended.*

Reports

(11) Where Convocation has delegated any of its powers under this section to a committee or to a referee, the committee or referee, as the case may be, shall report as required to Convocation, but where there is a delegation to both a committee and a referee, the referee shall report as required to the committee. 1966, c. 79, s. 1, *part, amended.*

Costs of administration

(12) There may be paid out of the Compensation Fund the costs of its administration, including the costs of investigations and hearings and all other costs, salaries and expenses necessarily incidental to the administration of the Fund. 1964, c. 54, s. 3, *amended.*

LEGAL EDUCATION; DEGREES

Bar Admission Course

52.—(1) The Society may maintain the Bar Admission Course and programs of continuing legal education.

Law degrees

(2) The Society may grant degrees in law. *New.*

INDEMNITY FOR PROFESSIONAL LIABILITY

Indemnity for professional liability

53. The Society may make arrangements for its members respecting indemnity for professional liability and respecting the payment and remission of premiums in connection therewith and prescribing levies to be paid by members or any class thereof and exempting members or any class thereof from all or any part of any such levy. *New.*

RULES

54.—(1) Subject to section 55, Convocation may make ^{Rules} rules relating to the affairs of the Society and, without limiting the generality of the foregoing,

1. providing procedures for the making, amendment and revocation of the rules;
2. prescribing the seal and the coat of arms of the Society;
3. providing for the execution of documents by the Society;
4. respecting the borrowing of money and the giving of security therefor;
5. fixing the financial year of the Society and providing for the audit of the accounts and transactions of the Society;
6. providing for the time and manner of and the methods and procedures for the election of benchers;
7. providing procedures for the election of the Treasurer, the filling of a vacancy in the office of Treasurer, the appointment of an acting Treasurer to act in the Treasurer's absence or inability to act, and prescribing the Treasurer's duties;
8. providing for the appointment of and prescribing the duties of the Secretary, one or more deputy secretaries and assistant secretaries and such other officers as are considered appropriate;
9. respecting Convocation;
10. providing for the establishment, composition, jurisdiction and operation of standing and other committees and delegating to any committee such of the powers and duties of the benchers as may be considered expedient;
11. governing honorary benchers, *ex officio* benchers and honorary members and prescribing their rights and privileges;
12. governing members, life members and student members, and prescribing their rights and privileges;

13. prescribing fees and levies for members and student members or any class of either of them, and providing for the payment and remission thereof and exempting any class of either of them from all or any part of such fees or levies;
14. respecting the Compensation Fund and prescribing the amount of the levy to be paid to the Society for the Fund and exempting any class of members from all or any part of such levy;
15. prescribing oaths for members and student members;
16. providing for the payment to the Society by any member of the cost of any investigation or audit of his books, records, accounts and transactions;
17. providing for and governing meetings of members or representatives of members;
18. prescribing procedures for the call to the bar of barristers and the admission and enrolment of solicitors;
19. defining and governing the employment of student members while under articles;
20. providing and governing bursaries, scholarships, medals and prizes;
21. providing for and governing extension courses, continuing legal education, and legal research;
22. governing degrees in law;
23. providing for and governing libraries;
24. providing for the occasional appearance as counsel in the courts of Ontario and before provincial judges, with the consent of the Treasurer and of the court or judge, of members of the legal profession from outside Ontario;
25. providing for the establishment, maintenance and administration of a benevolent fund for members and the dependants of deceased members;
26. prescribing forms and providing for their use, except the form of summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 207, ss. 24, 35, 40, 41, 42 (1), 43 (*part*), 50, 51, 53 (9), 54 (2, 3), 55, 56 (1), *amended*.

(2) The rules made under subsection 1 shall be interpreted ^{Interpretation of rules} as if they formed part of this Act.

(3) A copy of the rules made under subsection 1, as amended ^{Availability of copies of rules} from time to time,

(a) shall be filed in the office of the Minister of Justice and Attorney General; and

(b) shall be available for public inspection in the office of the Secretary. *New.*

REGULATIONS

55. Subject to the approval of the Lieutenant Governor ^{Regulations} in Council, Convocation may make regulations respecting any matter that is outside the scope of the rule-making powers specified in section 54 and, without limiting the generality of the foregoing,

1. respecting any matter ancillary to the provisions of this Act with regard to the admission, conduct and discipline of members and student members and the suspension and restoration of their rights and privileges, the cancellation of memberships and student memberships, the resignation of members, and the readmission of former members and student members;
2. requiring and prescribing the books, records and accounts to be kept by members and providing for the exemption from such requirements of any class of members;
3. requiring and providing for the examination or audit of members' books, records, accounts and transactions and the filing with the Society of reports with respect thereto;
4. authorizing and providing for the preparation, publication and distribution of a code of professional conduct and ethics.
5. respecting the reporting and publication of the decisions of the courts;
6. defining and governing the employment of barristers and solicitors clerks;
7. respecting legal education, including the Bar Admission Course;

8. providing for the establishment, operation and dissolution of county and district law associations and respecting grants to such associations;
9. prescribing the form of the summons referred to in subsection 10 of section 33. R.S.O. 1960, c. 30, s. 2; R.S.O. 1960, c. 207, s. 43, *part*; R.S.O. 1960, c. 378, s. 3, *amended*.

MISCELLANEOUS

R.S.O. 1960,
c. 207;
1960-61,
c. 44;
1964, c. 54;
1966, c. 79,
repealed

56. *The Law Society Act, The Law Society Amendment Act, 1960-61, The Law Society Amendment Act, 1964 and The Law Society Amendment Act, 1966* are repealed.

Commence-
ment

57. This Act comes into force on a day to be named by the Lieutenant Governor by his proclamation.

Short title

58. This Act may be cited as *The Law Society Act, 1970*.

An Act to consolidate and revise The
Law Society Act

1st Reading

February 27th, 1970

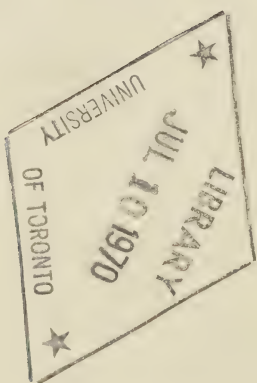
2nd Reading

April 14th, 1970

3rd Reading

May 27th, 1970

MR. WISHART



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